

*S.L.H. f9.19.*

A N  
E S S A Y  
O N  
*Sickness and Health;*

Wherein are contain'd,  
All necessary *Cautions* and *Directi-*  
*ons*, for the Regulation of DISEAS'D and  
HEALTHY PERSONS :

IN WHICH  
Dr. CHETNE's  
Mistaken OPINIONS in his late ESSAY,  
are occasionally taken Notice of.

By EDWARD STROTHER, M. D.  
*Coll. Christ. Cantab. & Coll. Med. Lond. Reg. Colleg.*

*Nunc, ratio quæ sit Morbis, aut unde repente  
Mortiferam possit cladem conflare coorta  
Morbida vis hominum, generi—  
Expediam.*

*Lucret. L. 6.*

L O N D O N:  
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MDCCXV.

*13*





Y  
F  
T O F H E  
Ingenious and I should think  
Sir Hans Sloane Bart M.D.  
President of the College of Physicians  
AND  
Richard Mead M.D.  
Fellow of the College of Physicians  
one for the Regia



of a fine Oct  
under Neglect  
Point  
regarding  
Directors  
ought to be  
deserving  
be said on  
Exposition  
And none  
in this  
Signed by W. P. for C. W. P.  
the date and  
Names  
MCCXXV



T O T H E

Ingenious and Learned GENTLEMEN,

Sir HANS SLOANE, Bart. M. D.

PRESIDENT of the College of Physicians:

A N D

RICHARD MEAD, M. D.

FELLOW of the College of Physicians,



H E near Relation this Part  
of Physick has to Prescrip-  
tion, the Necessity there is  
of a strict Observance in *Regimen*, an  
utter Neglect of Patients on this  
Point, as if their Healths were to be  
regain'd by Medicines only, and the  
Directions Physicians are so often  
oblig'd to inculcate on this Point,  
determin'd me to consider what cou'd  
be said on this Subject.

And none having a greater Share  
in this Affair, than your selves; these  
Sheets cou'd not appear under the

A 2

Names

Names of more popular Gentlemen; the Permission of this Address will give the Subject a Reputation, will stifle the Malevolent, and will encourage the Patients close Adherence to Orders: But what Errors are found in the Performance, are my own, and are chargeable upon my self only.

The Confidence the World places in you for their Healths, is easily guess'd at, by the Numbers and Success. The Dignity of our Profession can never be so well supported, as by Skill and Industry; and as you, Gentlemen, have given sufficient Proofs of your encouraging these, it is highly reasonable the World shou'd esteem such as the greatest and most deserving Patrons of Literature; and, as the latest often proves the casting Suffrage, these are the Wishes of,

GENTLEMEN,

*Your most humble Servant,*

EDWARD STROTHER.



THE  
PREFACE  
TO THE  
READER.

**H**OW low soever this Subject may appear, it requires both an exact Knowledge in the Materia Medica, and of the Nature of Diseases; this will appear evident from many Instances in the following Sheets: If Prescription demands a nicety of Judgment, it is because the Nature of the Disease must be known, that a proper Remedy may be order'd; and as Diet, and the other Non-naturals must be level'd at the same Mark, they must be univocal with the Remedies prescrib'd.



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It is a great Mistake to imagine the Non-naturals shou'd never be varied in the same Disease; because the Name of a Disease does not include the Causes of it; and they are to be alter'd with the Cause: I have taken some Pains to overthrow this general Error; and I hope they, who will give themselves the Trouble to peruse this Treatise, will find I have made my Point good in as easy a Manner, as the Subject wou'd bear.

It became necessary for me, in order to gain my Purpose, to descend to many Particulars in the Symptomatology; which, being no disagreeable Digression, diverts, instructs, and confirms the Necessity of the various Procedure in the Non-naturals, suitable to the Causes of the Disease then reigning.

You here meet with the Signs of many Diseases, with the Causes of those Distempers, with the Manner in which each Symptom is introduc'd, and with its Cure,

as

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as far as it relates to the Non-naturals; for without these, it would have prov'd a bare ipse dixit; and as Authority alone is never to be embrac'd without Reason to back it, so I would not advise any young Gentleman to give Credit to bare Assertions. This is one of the greatest Abuses that ever crept into a Profession; we give Drugs high Names, and declare them excellent in Diseases; which the World, by following the Advice, finds a vulgar Error: It is highly necessary, that he who proposes any Method, shou'd, at least, Name all the Circumstances of the Disease in which a Medicine succeed- ed, or give his Reasons why he acts; for hypothetical Gentlemen building up Indications without a Ground-work, and Men of Experience giving us Details of Success, without Circumstances or Reasons, are equally useful to the World; since Posterity dares rely on neither.

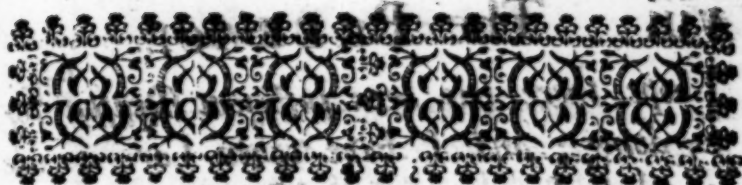
Wherein I have differ'd from any Gentle- men of the Profession, and more particularly from Dr. CHEYNE, in his late ESSAY,

## viii The PREFACE.

I hope there has been sufficient Reason for so doing; and I have taken Care to use all those I can't agree with in Opinion, in as handsome a Manner, as I ought: I blame no Man for thinking otherwise than I do; but variety of Sentiments gives me no Title to use a Brother with Incivility. I have taken great Care to support my Assertions with Proofs drawn from Experiments, Reason and Experience; but shall be proud of being convinc'd of any Error in this Performance, which I wou'd retract with Pleasure and Acknowledgment.

The first Part of my Euodia, concern'd Health principally, and this Performance was reserv'd till a proper Opportunity offer'd. And now I have inform'd you what you are to expect, your Acceptance is all the Return I wish for.

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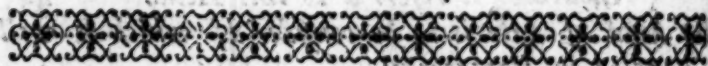
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E R R A T A.

PAG. 129. for Sal. vol. oleos. 3j, read Sal. vol. oleos. 3j. Tinct. Castor. 3℥, read Tinct. Castor. 3℥. p. 250. for Inlandibulum, read Infundibulum. p. 418. for Catheler, read Catheter. p. 434. l. 28. dele with.





# ESSAYS

## Sickness and Health, &c.

### Of the six Non-Naturals.



THE Word, *Non-Naturals*, denotes the Air, our Diet, Motion and Rest, Sleeping and Watching, Evacuations and Suppressions, and the Passions of the Mind. If we had

the Art of managing these mathematically, it were possible to prolong Life to



a great Period; and our Mistakes committed in these, are the Occasion of Diseases; they are so extensive as to contribute towards our Recovery also; and therefore I design here to take a View of them, both so far as they contribute to prolong Life, and to restore Health. This is called in Physick the *pars Hygieine*, from *ύγιειν*, which signifies *Health*. So many Authors have treated on this Subject, as have wrote Systems of Physick; but, to say the Truth, few have had regard to all the Circumstances: *Sanctorius* is one of the most remarkable; but he treats only of that Part which relates to keep the Sound in Health; which Author, as well as *Hippocrates*, and some others I have abridg'd in my *Euodia* \*; here I have also consider'd this Part of Physick so far as it contributes to restore *lost Health*; which *two* contain the whole *Hygieine*. Such as it is, the Publick are welcome to it; if it prove of Use, I have my Aim; I am not conscious of any Error it contains, which is all I dare venture to say for it.

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\* Part 1st.

CHAP. I.

*Of the Air.*

**T**HIS Element is of so great Moment to Mankind, that, as we can't live many Minutes without it, a Physician shou'd give exact Cautions to his Patients in the Choice of it. In Health, how to preserve it, and in Sickness how to recover their Vigour, and to contrast with the Distemper, they labour under. But this cannot be effected without taking a View of the Qualities of the Air, and also of the Nature of Diseases; the Air is a Composition of many Particles floating in a subtile *Medium*; to be pure and sincere, should be often purg'd with *Winds*, from its noxious Vapours; it should be now and then water'd with gentle *Rains*, in order to wash down the Salts abounding in it; it shou'd be *temperate*, that is, neither inclining to Heat or Cold; it should be *heavy* to a certain pitch; it shou'd have no *corruption* in it, drawn up to it from the earth, or any Neighbouring Places. Such Air is fit for healthy People to breath in.

Such *Air* stretches the Lungs, and fills all the Vesicles, and so sets the Blood forward in its due Course; it therefore assists in promoting Perspiration, and in preserving Health: The Advantages of *Respiration* and *Perspiration* are such to Mankind, that nothing but Death and Diseases must ensue any Deficiencies in them: And as it mingles with our *Spittle*, it also has some Share in creating or destroying our *Appetite*.

THE two most remarkable Properties of the Air are its *Weight* and its *Elasticity*, by which it rushes into all Corners; the more weighty it is, the less it acts by its Elasticity; Cold increases its weight, and Heat the Elasticity; these distinct Powers therefore are equal, but contrary. By these Powers it is, that the Air rushes into the *Trachea*, *Bronchia* and Vesicles of the Lungs, and blows them up, so that the Circulation may succeed with Ease; the Blood upon their sinking is compressed, and broken into small Globules, and is driven into the left Ventricle, which sends it into the whole Body. If Respiration then goes successfully on, the Blood is receiv'd and return'd, it is prepared to enter the minute Vessels, and by this Mechanism, as one of the chief, we are continued in Life.

PERSPIRATION is a Consequence of a regular Circulation, the Pores are fram'd for exhaling the *Steams* of our warm and rarified Blood, which are so numerous, as to hurry on dangerous Diseases upon their Retention; particularly if we feed plentifully. And the Air contributes to create or destroy our *Appetites*, because it is evident by many Experiments, that the Air contains an acid Spirit; 'tis this Spirit which mixes with the Salt of Lime in Walls, and makes the *Halonitre* we find upon them; it is this Spirit in the Air, which makes our Brass-Locks and Hinges turn green, by extracting the Verdigrease; 'tis this Spirit which enters into Vitriol expos'd, after we have drain'd it of its Oil, and makes it upon Redistillation afford an acid Spirit again; and therefore it is this Spirit, which gives Citizens keener Appetites in the Country, than they have in Town, it mingles with their Spittle and is swallowed plentifully into the Stomach, it twitches it and gives them a Sensation of Hunger, and the Smoak in Cities, blunting this Quality of the Air, makes their Appetites less keen. A pure Air therefore is simply necessary for Life, it keeps our Fluids, *ceteris paribus*, in due order, that they may not be too much rarefied, nor too compact, that they may be push'd forward into the utmost



Recesses of our Body, that by Motion they may be divided into minute Particles, and may thereby be prepar'd to enter into Strainers fitted to receive them; it helps to make our Fibres duly elastick, by which Force the Fluids are regularly returned; and in short, we advise this Air to all who are, or desire to continue, in a perfect State of Health. However as such Air is hardly found any where, it is impossible to avoid Sicknes long, unless we recompence the Damage receiv'd from the foulness or other bad Qualities of it, by some one or other of the Non-naturals; this Skill we gain by Experience, which however is best learn'd out of the Books of Physicians treating on these Subjects. Every Country has some Properties of Air inconvenient for Health; for some are too hot, others too cold, others are fenny, whilst others are mountainous; all which Differences give Rise to some Disorder or other, which, if not regarded and amended by the rest of our Non-naturals, we must of Necessity suffer for it, and when we are under the Lash, and disabled from relieving our selves by such a *Regimen*, we must then change into an Air stock'd with Qualities contrary to the Nature of our Disease.

I have

I have already \* given a Detail, out of *Hippocrates*, of what Diseases arise from certain *Airs*, which Work you may consult; and have there also added the Reasons of such Effects; to which we may add *too light* or *too heavy* Air; the Weight of the Air diminishes or increases; so that it is heavier by a great deal at one Time than another; the Reason of this Weight, as Dr. *Halley* thinks, are either an Accumulation, or heavy Vapours, or an Evacuation and lighter Vapours blended and floating in the Air: Air too heavy makes a gross and viscid Blood and rigid Fibres, so that all the cold Distempers arise from such an Air; whereas Air too light renders our Blood too thin, and often makes our Fibres too lax, by overstretching them.

THE Air of *Fenns* is moist and stock'd with Steams, which are various, according to the Minerals that lye under them, from whence it follows, that besides the Moisture, which relaxes our Fibres and stops our Perspiration, there are Qualities, unknown, hourly drawn up into it, and which a Physician, who lives upon the Spot, shou'd be well inform'd in, if he aims at his Patients

---

\* *Euodia* Part 1st.

## 8. *An ESSAY on*

**Safety:** The natural History of Counties must be consulted on this Affair; without the peculiar Nature of these Streams, Diseases will arise, which can never be prevented. Moisture is a *Menstruum* for Salts of any kind, and some Salts fit Sulphurs also for a Dissolution; so that both Salts and Sulphurs may float in such an Air; and when Air is thus deprav'd, what Mischiefs may we not expect from such a Bosom-Enemy?

No particular Directions can be given for the Relief of such as become Valetudinarians from such a Cause, till the individual Nature of the Mixture is discover'd; for only Effects must carefully be regarded, till they fish out the real Mixture. However if Necessity obliges People to dwell in such a County, they must study to amend the Moisture of their abode, by removing Woods from them. It has been observ'd, that our *American* Colonies have been more healthful, since they have fell'd their Woods, which render'd the Air moist; they must also dry up their Ditches, and keep their Houses well air'd with large Fires; they must exercise often and much, in order to exhale the Superfluities retain'd by the Stoppage of Perspiration, which they would do well to promote also by frequent brushing; they must take less Sleep than others; they should

give

## *Sickness and Health, &c.* 9

ve themselves up to a chearful Life, they might to drink Liquors, and eat Meats of warm Nature; and if it were known from that peculiar Minerals those Salts and Sulphurs did exhale, it wou'd be easy to find out some Specifick against their noxious steams. But for such who are under no Obligation to dwell amidst Destruction, let them hasten their Departure, if they wou'd avoid Consumptions, Agues, Fevers, Fluxes, Quinzies, Pleurisies, and a long Train of violent and almost invincible Diseases, such as *Essex, Lincolnshire, Lancashire,* and other moist Counties fatally experience,

A *dry Air* contains saline Particles in it undiluted, and therefore well fitted to occasion Diseases proceeding from Acrimities; these Salts are swallow'd down, and even enter our Pores; they introduce Consumptions and Dysenteries; not only do they enter our Blood, but the Drought promotes Perspiration too much, and exsals the watery Parts, and leaves the Salts in Clusters within us; so that the Fibres may easily be fretted into Ulcers, Pains, Inflammations, and such like Disorders. Since then this is the Case in a long dry Season, which however is seldom the Case in *England*, and were it, yet it is experienc'd to be universally healthful; we are now to consider how to remedy the excess of Perspiration, and the abundance



abundance of Salts nestling in our Fluids by the other Non-Naturals. Our Diet must consist of such Victuals and Drinks as we do not easily perspire, and as contain few Salts in them; wherefore Melons, Cucumbers, Mushrooms, Lettice, Spinage, and such cooling Things are convenient; Milk-meats, Water-drinking, Gruels, and Panado's are to be used freely: We should Exercise little, Sleep much, wear thin Cloaths, and live a calm serene Life. As *Catarrhs* depend upon a Retention of too great Moisture; they who are Subject to them, should, if they can, retire to a Place where the Air is dry, it is for this Reason we order consumptive Persons, who become such by Defluxions at the Beginning, to repair to *Kengsington Gravel-Pits*; it is a dry Soil, in as much as the Gravel being very deep sucks up the Moisture, and little of it is drawn up again into the Air, so that Showers of Rain do little harm. The same holds good in *Asthma's*, for where the Lungs are habitually crouded with Humors, the Retention of the *Perspirabile*, flows thither, as to a Sluice. and endangers those Inflammations of the Lungs, *Asthmaticks* are so often Subject to: And if spittings of Blood depend upon a waterish Constitution, as they do in those frequently liable to *Catarrhs* from catching Cold, the Dryness of the Air preventing the Stoppage of Perspiration, cures

the original Occasion of such Spittings, of it self it does not contribute towards the Relief of this Disorder. It shares greatly in preventing Agues and feverish Disorders, when it is so temperate, as it generally is in *England*, for without Perspiration, we must expect Catarrhs and Fevers of all Kinds. Let us but take a View of the *marshy* Parts, and *Downs* of *Kent*, and we shall soon perceive the Difference between their Healths. The Peruvian Bark goes off well in the former, whilst the latter starves the Physician. *Rheumatick* Pains, hatch'd and foster'd in a moist Air, are readily remov'd on shifting into a dry Habitation, unless the Food be much deprav'd. In short, where a due Perspiration is required, as it is in most Cases from Fulness, Patients must be advis'd to live in a dry Soil, that the Atmosphere of Vapours exhaling from the Earth may be as small as possible. Few are so weak, as to chuse a moist Soil for building in, and now a Days Moats are never without silt around Gentlemen's Seats, and large Nurseries ought also to be forbid, because it is impossible for such Seats to be wholesome, where they are surrounded with so much Moisture. This puts me in Mind of a remarkable Story: The Gentleman who shew'd Dr. *Radclyffe Holland*, told me, he was order'd by King *William*, to shew him his Country, and he had given private Orders

Orders to the Coachman, when he came upon the Bridge of the Lord *Arbemar* House, to turn the Faces of the Horses towards the Canal, which Orders being obeyed the Gentleman then ask'd the Dr: how lik'd that Prospect (of a Canal a quarter a Mile long, and finely wooded on each Side, down to the main River;) the Dr. swore, *not at all*; for, said he, if this were my Seat, I would cut down all this Wood and choak up this Canal; the Gentleman spoke of the *Visto*, and the Dr. of *Health*. And surely there is no need of Canals in moist Country; and therefore in moist Countries Drains are absolutely necessary: The Person, who keeps well in Health amidst much Moisture, must be near a-Kin to an *Otter*.

WE come next to consider the *Heat of the Air*; as Air is Elastick, Heat augments this Quality, and evolves the Particles of the *Æther*, so that it then occupies a much greater Space, than in its natural State, as Bulk for Bulk weighs less; the Effect of this Rarefaction is very considerable in human Bodies; for the Globules of the Blood grow larger thereby, in as much as the Air they contain is also dilated to the same Degree as that of the Atmosphere; therefore in hot Weather the Blood is rarefied, and its Principles are exalted, so that we fall

Fevers and Eruptions, our Perspiration is increas'd, and Effervescences are rais'd in our Fluids; we study to balance this excess of Perspiration, by a cooling and diluting Diet, which clogs the hurry of our Fluids, and consequently curbs so great an Evacuation: Sleep and Rest contribute their Share in abating the Circulation, for Motion and Watching wou'd move the Blood and Spirits too excessively; we try to promote a cool or two every Day, which keeps our body cool, and we keep free from any excessive Passion. Immersion also is convenient in such a Case, it closes the Pores, and if we stay long in, chills our Blood. However, there are certain Distempers that a hot Air is very conducive in; *Cachecticks* of a cold, phlegmatick, watery Constitution, grow easier by removing into a warmer Country; the *Anasarca* abates, when other Things have fail'd, by the \* *Psammismus*. In a *Hydrocephalus*, the warmth of the Nursery is absolutely necessary, it exhales the *Serum*, which abounds too much in the Fibres, 'tis the warmth of the Fomentations which makes them effectual in this Distemper. *Cold Head-aches*, if they are habitual, are best remedied by removing into a war-

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\* Burying up to the Neck in Sand.



mer Country. \* Heat, says Hippocrates, softens the Skin, lessens Pains, mitigates Shiverings, and Convulsions; takes off the Heaviness of the Head; it is useful in broken Bones, if they are bare, and in Ulcers of the Head, and also in Herpes's wherever; the Reason of these Head-aches is Stoppage of Perspiration, and a Grossness of Blood ensuing thereupon, so that till the Blood becomes rarefied, and the Perspiration is restor'd, the Distemper will continue. 'Tis a hard Task to cure *Palsie's* in the Winter, because the Cold hinders the Perspiration, and thickens our Humors; whereas in Summer our Humors are rarefied, and the Perspiration is increas'd, and all this is effected by the Heat of the Air, especially if it be dry; the *Bath Water*, by its Heat alone attenuates our Fluids, and sets them in Motion, and cures this Distemper: I speak of *cold Palsies*, where the Blood is gross by the abundance of Phlegm; for in such *Palsies* as are produc'd by a genuine

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\* Calidum suppurationem faciens, non in omni ulcere maximum securitatis præstat indicium; cutim emollit, extenuat, dolorem lenit, rigores, Convulsiones, tetanos mitigat: Capitis gravitatem solvit: Omnibus fractis, plurimum prodest, maxime si nudata sint, multoque magis ijs, qui in capite ulcera habent: ijs etiam, quæ moriuntur aut ulcerantur a frigore herpetibus, denique exedentibus sedi, pudendo, utero, Vesicæ, his omnibus calidum amicum & decretorium, frigidum inimicum & interimens. Aph. 22. Sect. 5.

Rheuma

umatick Blood, and are fresh, by this  
 mistake you wou'd not remove the Palsy,  
 and moreover you wou'd hurry on a Phren-  
 In fine, wherever Rarefaction is known  
 be of use, advise your Patients to remove  
 to a warm or hot Air.

WHEN the Air is *cold*, it abates of its  
 efficacy, but increases in its Weight, as  
 find by the *Barometer*; it is therefore  
 that our Blood in Winter becomes more  
 compact and gross, and less apt to steam  
 and throw off *Effluvia* by the Pores; where-  
 the Winter Diseases are Coughs, Asthma's,  
 curries, and Inflammations of the Lungs;  
 want of Perspiration the Blood is fill'd  
 with Contents which ought to have eva-  
 porated into the Air; and with the abun-  
 dance of acid Salts, we have already shew'd  
 abound in the Atmosphere, it thickens  
 and stops in the smallest Channels, and so  
 gives on inflammatory Disorders. Now it is,  
 that every one knows we must keep warm,  
 heaping on Cloaths, and making our  
 chambers hot; we must eat more plen-  
 tifully, and drink more generous Liquors;  
 exercise comes in Fashion, and, so we keep  
 warm, Sitting late up is conducive, because  
 catching, as \* *Sanctorius* observes, moves

the Blood from the Centre to the Circumference; that is, it makes the Blood move swifter, and by Consequence destroys Cohesion and Grossness, and enlarges the Perspiration. The Passions shou'd incline to Mirth and Jollity, which move the Blood briskly on, and for this Reason, Assemblies, Comedies, Opera's, and Gaming do usually go forward. However, there are many Diseases a cold Air contributes to cure, *Madness*, the cooler is the Air, the less the Juices ferment, and such as are held with this Disease, are always kept cool, they bear Colds and Hardships with Ease, and they serve to curb the Fury of their Spirits. In Phrenzies also, we must keep them cool as possible, a warm Regimen, confining Frantick Persons to Bed, or keeping their Rooms too warm, increase the humors of their Spirits, and contribute to render their Disorder mortal. In Consumption when we have conquer'd the Defluxion, cool Air, so it be dry, is useful for closing up the gaping Mouths of the Glands seated all along the Canal of the Lungs, for want of which Physicians give Stypticum internally to amend the Laxity such a Disorder leaves behind it. In a *Spitting of Blood* this Coolness serves to close up the Vessel, and occasions Blood to cake upon the Orifice, and so heals it. In Constitution apt to faint with Heat, how suddenly a

Faintnesses, or the Dispositions to them relieved by Admission of cool Air? The Heat that rarefies the Blood too much, makes the Circulation so brisk, that the Heart is not capable of pushing it forward, but the cool Air presently condenses their Blood to a proper Consistence, nor do's it then hurry on, so that the Heart receives and returns its Load with ease. Cool Air is remarkably useful in hectick Fevers, so that *Galen* advises such People to live under Ground in Summer; this is an uncomfortable Advice; but the Country Air, which is cool and fresh, is almost a present Relief to hectical Citizens: Whenever then the Blood and Juices are found to be too thin, too bilious, and too hectical, advise a cool Country Air to such for their Relief.

FROM what has been already taken Notice of about the Gravity of the Air, 'tis very easy to see, that the more rarefied Blood becomes too much dissolv'd by exposing Persons to too light an Air. I remember that *Acosta* speaks of a Spitting of Blood he got by mounting up to a high Mountain in *America*, which might possibly happen to any Person, whose Blood was too thin, and whose Lungs were very tender. The Column of Air on high Mountains is much shorter, and consequently lighter, than that of Plains; Captain *Halley's* Trials on *Snowden*

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*den Hill* proves, that the Mercury settles an Inch for every 310 Yards of Height; and if *Acosta's Hill* was as high as *Snowden*, the Mercury wou'd then settle four Inches; so that the Column of Air in such a Height, and of an Inch Diameter, would be lighter by 14320 Grains, that is, by 29 Ounces, 6 Drams, and 2 Scruples; from whence it wou'd follow, that the Blood, having such a Load taken off from it, wou'd swell, and distend the Vessels, and at least wou'd occasion a Shortness of Breath. The same Dilatation wou'd happen to bottled Liquor carried to that Height; the Air contain'd in the Liquor wou'd rarefy to the same Pitch with the Air without, and crack the Bottle, and make it fly into a thousand Pieces. They who live in so light an Air, are generally People of quick Parts, their Blood and Spirits are of a loose Texture, and their Vessels are enlarg'd; so that the Brain is supply'd with all that is necessary for performing its Functions well; and moreover, their Fibres are pretty strong and elastick, because mountainous Places are generally cool, as appears by Snow's lying all the Year round on high Hills; as on the *Alps* in *Italy*, and on *Cheviot* in *Northumberland*; besides they are generally rocky, which makes them cool and void of Vapours; for were they moist of themselves, their Fibres wou'd be flabby, and they wou'd be Subject

to Dropsies, which they are not. When *Cold* immediately succeeds *Heat*, Perspiration is remarkably curb'd, and that brings on Fevers or Coughs; and when Rain and cold Weather succeed dry and hot, then it is we find tender People fall down in Pleurifies, Fluxes, Fevers, Coughs, and Rheumatick Pains: Here is a change from a rarefied Air to a condensed one; and from a rarefied and elastick, to a compress'd and Non-elastick Medium; such sudden Changes all Islands are subject to; and consequently the Blood and Fibres must suffer in Proportion: Cold and Moisture do both stop up our Pores, and subject us to all the Diseases, which are very numerous, a Repletion of aqueous, sulphureous, and saline Humours are capable of producing; and such is our *Perspirabile*, according to the learned *Bellini*.

A *putrified Air*, is when the Particles of Air, which, as Dr. *Hook* observes, are watery, saline and sulphureous too, have never been purg'd by Winds, but have stood all a long Time, and its saline and sulphureous Particles have fermented together, and have contracted a dampish Mustiness; Rooms in moist Houses which have not been purg'd, either by Fires or opening the Windows, and the Bed-cloths and other Furniture of these Rooms also, abound with a *putrid Air*; 'Tis as wholesome to lye in a

Grave, from whence dead Bones have been dug out, as to Sleep in such a Chamber such Beds are fitter for producing Mushrooms, than for Christians to Sleep in; they are only proper for hatching Moths and Vermin. All Caves and Dungeons have this putrid Air in them; and any Place which is on all sides so surrounded with Hills, as to give no outlet to the Air, (for Winds blow horizontally; and therefore only scum off the Top of it) must needs abound with such a putrid and malignant Quality; Steams of various Minerals exhaling from the Earth, standing still, and being unmov'd by Winds, must breed such a malignant Quality in the Air. It is not easy to know what this Air is in particular but so much we know, that it stops Perspiration; it cannot be drawn into the Lungs without Reluctance, by Reason of its Smell it corrupts the very Stuffs and Linens which demonstrates its *Acidity*, and throws us into cold Sweats: There is no doubt but epidemical Distempers may arise from such *putrid Air, Moisture and a close Warmth*, dispose the Air to it. If Sea-moated round are often infested with it, the Calmness of the Weather, and this Moisture together, join to make a most unwholesome *Medium* to breath in. *Damp* are a corrupted Air; the later Philosophers suppose that the Earth (attracting Acid and Water

Water) makes a Salt ; they suppose that the Earth grow's feeble in attracting, and then the acid Spirit is lost (rather chang'd) and the Air putrifies ; and if the Air of a whole Country putrifies, pestilential Diseases arise, because the Air becomes universally infectious, and as excessive Heats, like Fire, destroy this Spirit, they also bring on pestilential Diseases. I have already shew'd the Air contains an acid Spirit, and were we inquisitive enough, as Mr. Boyle advises, we might discover many other peculiarities residing in this *Medium* : It wou'd not then appear strange why reddish or black Eschars are produc'd upon the Skin in pestilential Cases ; for the Air sometimes contracts by Attractions and Repulsions, that is, by Fermentation, almost a caustick Quality. All Authors do agree, that there is either a caustick Acid, or volatile Salt in the Air ; but then this Question might arise, if the Air is actually Caustick, none could escape ; because it is equally apply'd to all, and all breath and swallow it down with their Spittle alike ; wherefore it appears to me, as if some minute Conditions were yet wanting to make it so ; and as most Peoples Juices are stock'd with fit Particles for the Purpose ; therefore most People are seiz'd in so deprav'd a Season ; and the Reason why some few escape is, because their Blood has Particles of such a Nature, as to blunt these



Salts, or stop their Fermentation : If this is not the Case in epidemical Diseases, we are to seek, I'm afraid, for a better Reason ; none, that I know of, being so adequate.

HAVING descended to most Particulars, we now come to consider the Conditions of the Air in certain Places ; I have already observ'd that *Seats* plac'd moderately high have a thin, but *pure* and *dry* Air ; the *Thinness* depends on the Height, the *Purity* on being expos'd to the Winds which purge it ; and the *Dryness*, on the Moisture's dripping down from it, upon all rainy Seasons : It must follow then, that such a Seat will be healthful, (because the Blood will be gently rarefied) it will be kept pure and sweet, and be without Moisture ; it will therefore breed a good Appetite, promote Perspiration, and be Elastic.

SUCH as are placed on a *Slope*, with Mountains on the East and South Side, must be unwholesome, because they have little or no Sun comes to them, and consequently will be moist and foggy, the Vapours which shou'd be exhal'd, will lye upon the Earth, and hinder Perspiration ; and if Hills lye on the North and West, the Heat will so beat upon them, as to draw up vast Moisture, and make the Country moist ;

hilly

hilly Countries are generally moist, the Height of the Hills dashes the Clouds, and makes them either gleet down into the lower Grounds thro' the Crannies of the Hills or drop into Rain, witness Mr. *Townley's* Account of *Lancashire* \* : Where he computes, that they have twice as much Rain at *Townley* as at *Paris*, and more than they have any where in *England* besides. So that Mountains are either rainy or snowy, and are therefore either too cold or too moist to be inhabited.

*Champaign Countries* are generally wholesome, but I would have this *Plain* to be well guarded against the Moisture of the neighbouring Hills, there ought to be Drains, natural or artificial, to carry off all Moisture; it must not be a Vale surrounded with Hills, tho' at a great distance; for then it wou'd be a Reservoir for all the Waters, they can deliver into it; but it must be a good Soil, under which is a Sand to suck up all the Moisture of the Heavens, for it ought to have none of its own, The deeper they are oblig'd to fetch their Water the better; if they are bleak, 'tis easy to prevent it by Nurseries at a Distance: And I believe we need not have much Fear of excessive Heats in *England*. We

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\* *Phil. Transact.* No. 208. p. 51,

may, in short, more readily bring a *Plain* well drained, than of all other Situations, to all the Purity imaginable, and most easily amend its Faults.

*Woody Places* of all others is the most unwholsom Air to breathe in, 'tis an artificial Air, that corrupts our Juices and stops our Perspiration, as has been observ'd, it is not only moist, but it is also stock'd with other *Effluvia* from the Trees, so that it is watery, and either saline or sulphurous, according to the specifick Nature of the Trees growing upon the Soil. If a Plant can suck up 27 Ounces of Water and more, and at last weighs but two or three Drams, the Air must partake of this Moisture, which is constantly flying off, and be impregnated with the Steams of it; and if we consider the yearly growth of Trees in Proportion to the Rain they are water'd with, we shall readily conceive, that the Air must partake of the Vapours flying up into it; wherefore it behoves Gentlemen, delighting in Arbors and Nurseries, to consider at what Distance they ought to be placed, and also what Sort of Trees they plant; I believe Firr, Pine, and all the warmer Kind most convenient for our Country, because they communicate Particles fit to correct the Coldness of our Air in Winter; however, neither these nor others ought to be

## *Sickness and Health, &c.* 25

plac'd too near their House, because the Standard of Air is to be pure, dry and thorough-blown, to be weighty and elastic, and all Deviations from thence must be amended, as much as possible by some contrivance or other. We are to suppose, that Seats are built with a Design to preserve Health, but if the Inhabitants of that place contract by their Irregularities, Disorders, which that Air is not adapted to correct, they must either make it up with a proper Management of the other Non-naturals, or remove their Quarters, if the Air is affirm'd to be necessary for their Relief.

*Rocky and open Places* are apt to be too cold or too hot; in Winter they are starving, and in Summer scorching hot; and all extremes are to be avoided; they reflect the Sun-beams in Summer with too much violence, and the Coldness of the Stones in Winter conquer the Sun-beams, and the Air around feels cold. We have already seen that Mischief these Excesses of Cold and Heat do to human Bodies; wherefore rocky Places are improper for Seats.

*Rivers and Lakes* are moist, however Lakes are worse than Rivers, because besides their Moisture, they convey a putrified Air to us. This Situation threatens nothing but Diseases, as has been already observ'd.

THE



THE *Sea Air* abounds in Salts and Moisture, and it smells Sulphurous; so that here we must expect to suck in an impure Air. *England* is not the wholesomer for being surrounded by the Sea; from hence it is that we are subject to that Variety of Weather our Country is noted for; our midland Counties are the most healthful; and I have observ'd that where the easterly or westerly Winds give Rains in abundance to the Coasts, yet the middle Way between Sea and Sea has then been calm and dry; the Clouds brought from either Sea, drop before they come midway; but then the midland Countries can't grow all Grains well, or however their Grain is dwarf'd, for want of sufficient Moisture. Persons subject to the cold Scurvy or Eruptions must forbear living by the Sea-side, because, the Salts being dissolv'd in Water, the Sun makes the Steams mount up into the Air, and blend with our Spittle, and cluster in our Blood; but yet they whose Juices are too watry and too phlegmatick shou'd live at the Sea-Coast; Sheep dying of the Rot in marshy Parts of a County, are sent down to the Coast to feed upon that Grass, which tastes brackish, and they are very often returned in Health; their Blood is watry and at length turns viscid, and stops in their Livers and gives them Jaundices, perceiv'd by the

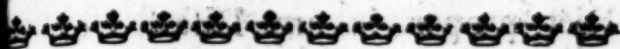
White

whites of their Eyes; upon Dissection their  
 vessels are found to be a Quagmire of  
 Mucous, and are every where obstructed.

THE *Air of Baths* is a warm and moist  
 Air, the Sulphurs, exhaling along with their  
 humidity, hinder the bad Effects in some  
 measure of this Moisture; however if Baths  
 be plac'd ill, that Air can't fail of being  
 prejudicial, being neither fit to breath in,  
 nor perspire nor to create an Appetite; let  
 for Example, suppose *Baths were plac'd*  
*a Vale surrounded every where with*  
*hills, fraught with Sulphur and Water;*  
 what a monstrous Place must such a Seat  
 be? Here must be the same individual  
 Air, that perhaps took up its Abode there  
 at the Deluge; here are Streams in abun-  
 dantly daily exhaling and mixing with their  
 Atmosphere, and which in Length of Time  
 must be merely Water, and consequently  
 stagnant, because as there is no Vent for their  
 Air, the Sulphurs will take such Place as is  
 allotted for them by their Gravity; that is,  
 the heavier Sulphurs will sink to the Ground,  
 and the lighter will mount above the Moi-  
 sture: So that by this Situation they are  
 soak'd up with *Damps*, or a moist and pu-  
 trid Air; The *Moisture* is demonstrable,  
 for reason of the Steams exhaling every  
 minute, which are a proper Nest for Putre-  
 faction; and the *Putrefaction* is also a ne-  
 cessary

cessary Consequence of its being a *Reservoir* or Pit, defended from the Winds, by Hills. If there were such a Place, as the describ'd, and Necessity drove any thither to seek their Health from those salutary Waters, they ought to lodge on the Down at some Distance from the Baths, or take up their Lodgings, if no better could be found in the highest Rooms of their Houses, where Salt wou'd not run, or Salt could not be made; for the lower Part must be necessarily *moist and putrid*; that when such Waters have had their confirm'd Effects, which they generally have in six or eight Weeks, 'tis high Time for those who have liv'd in an Atmosphere of Vapours and Putrefaction, to shift their Quarters into a dry and thorough blowing Air. If there be such a Place in the Globe, their Physicians would never venture to commend the Situation, but probably wou'd slur over this Imperfection, and advise you to take the Air on the *Down*





## CHAP. II.

### OF DIET.

**A**S this Article is the most considerable of all the *Non-naturals* in producing Diseases, so it ought to be regarded by the Valetudinary and the Sick in a most particular Manner; it is impossible to give absolute Directions here, no more than in Health, or to say the Truth, all Meats and Drinks are but relatively good or bad; that is, all we take is good or bad, with respect to Circumstances, which are best determin'd, by giving an Eye to the Temperaments and the Causes of the Diseases, which afflict our Patients, these are the Views we are to have to prevent Sickness or Death.

WHEREVER then Directions are given for the Management of our Patients in an absolute Manner, affirming any particular Meats or Drinks useful or prejudicial; 'tis erring against common Sense, if they add not the Nature of the Diet and the Disease too. And as Diseases vary infinitely, nay as the same Disease, having every Symptom alike, varies very often in its Cause; so it is impossible,



impossible, for a Physician to determine the Diet proper. in any Disease, or in a valetudinary State, till he considers the various Causes of it, and knows from which of those Causes it arises: And thus it is not in our Power to assure Persons, for Example, in a Fever, what Diet they ought to insist upon, till we know what Species of Fever it is, they labour under; nor affirm that valetudinary Persons ought to observe any Sort of Victuals invariably, since Tenderness changes as the Constitution does but that it is never alike in all.

IT is therefore a standing Rule, that our Meats and Drinks ought to consist, as nearly as can be, of Particles contrary to the Cause of the *Disease* reigning, or, contrary to the *Temperament*, if they be valetudinary and sickly. If we are appriz'd indeed what Health is, and that a Person is of a vigorous Habit, the Diet ought to be such as will continue this State.

IF you please then, we will take a short View of a healthy State, that we may the better understand the sickly one; the first is preserv'd and held on by a Diet supplying Nourishment, which in all Particulars keeps up the Proportion of Principles in our Juices, as we find them in Health. The Blood is a Medley of Salt, and Sour, and a thousand

and other Materials, as *Hippocrates* observes: But, to come nearer to the Point, we know by *Analysis* that there is a certain Proportion of Principles in a sound Blood, which ought to be known to a great Exactness by Physicians; and if we wou'd preserve our Blood in a due Tenor, we must mend our Diet, as near as may be in this Proportion; it is very evident that our *Vi-*tuals consist of different Parts analogous to those in our Blood; as to *Animals*, there is no Question, since they digest in the same or like manner as we do: As to Vegetables a Division of them, into their minutest Parts, whether by Fire or without it, shews they do also consist of like Parts; and Minerals and Metals do also contain the same Sort of Parts, but they are unfit for Diet, because their Parts are too much concentr'd, however they are well fitted for Medicine, for this very Reason, and are given in small Doses, with Design to add such Parts are wanted, or to correct the Juices too much depraved, which they effect more suddenly than Victuals can, for they contain Principles nearly homogeneous in small Bulks; so that we may more properly say, they are intended rather to correct the vitious Qualities of the Blood, than to fill our Vessels, which is the main Design in Nourishment, whereas Diet of Vegetables and Animals does

does both, fills and corrects the Depravities but more eminently the former.

THESE being premis'd, Health consists in a certain Degree of Elasticity in our Fibres, a determin'd Pitch of Mixture in our Fluids, and a Circulation without Impediment thro' the greater and larger Channels, forwards and backwards; if our Fibres or low Pipes containing the vital Liquor, and all its Separations bend outwards and turn again with Ease, they syringe out Blood and all its Juices outwards, and suffer no Parts to rest or run off, but such are destin'd so to do: If the Mixture be exactly proportion'd, it acquires a just Degree of Thinness, so that there is no unequal Texture in it, that is, so that one Part of it is no where thicker than another, but being every where equally comminuted and thin, the Juices run off into the proper Strainers, without being retained, and therefore without depraving the whole Mass, and as a wholsom Consequence of this just Tenuity, the Spirits are separated into the Brain, and run with a due Force thro' the Nerves every where, whose Presence is of such universal Use, as that without them, the Animal wou'd dwindle into a Carcass.

As I have chanc'd to name the *animal spirits*, give me leave to observe to you the amazement I am under to find some persons, of no small Rank in their Profession, denying their Existence, upon so slender a Foundation as they do. They \**smooth* tell us, that those stupendous Motions we daily observe in Creatures, are all, one by some *extrinsick Agent*, for add they, if the Nerves you'd never be discover'd to have any Cavity in them, which is a Mistake, what can be separated thro' them? I take the Matter right, this Argument proves too much, for what Diligence have not Anatomists us'd hitherto, to discover the Mouths of the Lacteals without compassing their Purpose? *Dr. Keil, p. 14. Sect. of his Anatomy, the 7th Edition, has these Words,* "The Mouths of these Lacteals, which are open into the Cavity of the Guts, from whence they receive their Chyle, are so small, as not to be seen by the best Microscope." But the whole and of Physicians is so far from denying, that they acknowledge the Fact, namely, that a gross Liquor is strained thro' invisible Pores. Can it be an Inconsistence then to assert, that an ethereal Substance may enter



into such imperceptible Holes? There are other Proofs sufficient to confirm the Existence of animal Spirits, which I have no leisure to produce at present, however the Invisibleness of hollow Tubes for Spirits to pass thro' were judged a sufficient Proof to destroy the commonly accepted Opinion of their Being; methinks 'tis evidently overthrown by the Case nam'd, which the Objectors themselves allow. And if upon Ligature, they are not observ'd to swell we ought to consider the Nerves, being very porous, suffer the *Aether*, which is the Spirits we speak of, readily to escape; and that they contain a Liquor, plainly appears by Coction.

BUT as the Circumstances, above nam'd to be a complete Idea of Health, must include some Negatives, as well as Affirmative Sub-divisions: It must be observ'd, that descending to Particulars in Distempers, will clear up this Notion, and make you comprehend my Meaning very readily: Wherefore I shall remark to you, how our Bodies are affected in Sicknes, and how many Ways we can be sick.

ALL Diseases then are Consequences of the Blood, Solids, or extraneous Bodies offending in Quantity, Quality, or Motion, their Excesses and Deficiencies, their Species,

and Properties; their Quickness and Slowness, or their Sensibility and Insensibility are the Subjects of our Inquiries; when these come to be combin'd, they acquire certain Denominations, which we know by their pathognomonick Signs, so when Pain is join'd to a Fever, a Cough, and a Difficulty of Breathing, we call this a *Pleurisy*; but the Causes of this Collection of Symptoms must be found out by a particular Search made into the Faults in the above-said Quantity, Quality and Motion; for Example, we know by the Fullness and Swiftness of the Pulse, that the Blood is rarefied, and fills each Section of the Vessels more than in Health; we know also, that it moves on too rapidly; we see by the Buff upon it, that it is viscid and glewy, and therefore apt to stick to the Ends of the smaller Vessels, and so produces Pains.

DIET answers the End of Physick in all its Extent, save that of the *Time*, and in this Point we are often at a loss in depending on Diet only; if Diseases are much rooted, and run their Seasons swiftly over, as many of them do, we must have Recourse to Drugs, which contain Particles eminently fitted the reigning Taint of the Blood, to such Materials as in small Bulks may have great deal of useful Matter: Otherwise, say, we can answer all the Ends of Physick

by our Meats and Drinks. If we have play'd the Gourmand in some, or of many of our preceding Meals, we must fast from Breakfast and Supper, till we have brought our selves to be tolerably easy; if our Stomachs are loaden with a Quantity of Humours, we have a Diet of Barley and Plums to evacuate it gradually; if we have brought on Diseases by fasting too long, or violent Exercises, or Evacuations have exhausted us, we must encrease our Meals to such a certain Degree as will repair the Loss; and not only are we able to supply Nourishment, but we have even a Diet which will curb any sort of Evacuations; let the Blood be vitiated any how, we are furnish'd with Materials in Diet, which will surely remedy the Fault: And lastly, if the Blood's Motion be too much accelerated or retarded, we can draw, from the Kitchen, Meats and Drinks suitable for the Condition the Juices are then under: As I am just about to proceed upon this Head, I shant here anticipate my Design, only it may fairly be infer'd, that it is necessary a Physician should be well inform'd of the Nature of his Materials; and he who is not, will make an awkward Figure in his Profession, since Success is always in Proportion to our Knowledge and Diligence; Knowledge without Diligence, is as a Treasure lock'd up and never us'd; and Diligence without

out Knowledge, is like riding Post out of the Road; but when *both* are join'd, 'tis like a Rock, which the strongest Storms can never overthrow: And pity it is, that such Persons shou'd often be suppress'd by Cabals of designing Men.

AND as this Assertion on the Usefulness of Diet is a Truth of Experience, it will now evidently appear in most Diseases, we shall have occasion to descant upon; I shall pitch upon some of the main Distempers, and which principally demand the Physicians Care. The first we meet with treating on the Diet requir'd in *acute* Diseases is *Hippocrates*; it is now out of Date, and cannot be understood in many Places at this Day; what a wide Difference has Time made in our Victuals and Drinks? The present Age affords us Varieties, which the Ancients were Strangers to; we feast Luxuriously, and they fed upon simple Diet: However, 'tis certain, the very individual Diseases they labour'd under then, we also suffer now; with this Difference, that more are added to the Catalogue, since those Days, owing principally to the vast Varieties of Particles our Diet abounds in.

HOWEVER, acute Disorders may agree in some Particulars, there is a vast Difference among them, many of their Circumstances



vary, so that the Diet must also be chang'd in some Particulars: Some growing evidently worse by a Diet of Sours, whereas others necessarily require them, which we shall have occasion to mention anon, in their proper Place.

As *Fevers* are the Dart that strikes us most frequently, the greatest Regard must be had to our Diet in them; to determine which we must take a View of the different *Species* of them; in some, the Pulse is thick and strong, and they melt with Heat in a violent manner; such labour under the following Symptoms; the *Fulness* of their *Pulse* denotes the Rarefaction of the Blood; the *Swiftness* of it denotes the Quickness of the Motion; the *Pain* of the Head shews the stretching of the Vessels to over large Dimensions from the Fulness, which Pains are the most violent of any, by Reason of the Pressure of the Membranes; the *difficulty of Breathing* springs from too plentiful an Influx of Blood into the Vessels of the Lungs, so that they become thereby rigid and unfit for their Expansion; the *Urine* in such is generally red and high-colour'd from the Nature of the Salts reigning in the Blood; the *Thirst* depends on the Exhalation of the thinner Parts, by Reason of the Excess of Heat within us; the *Watchings*, from the quick Circulation of Spirits

spirits thro' the Nerves; *Ravings*, from the Accumulation of Juices, their Stagnation, and Inflammation of the Brain; the *Bleeding*, from the Rarefaction of the Blood to such a Pitch, that the Vessels can't resist the Load, but crack and spill their Contents; *Pain* any where, from the Blood moving on too briskly, and distending the Capillaries too much; in this Case the Diet must consist of such Parts as will dilute, divide, and keep the fermenting Particles at a sufficient Distance from each other; and also of unactive Parts, or such as if left to themselves wou'd hardly putrefy, or of such as will sheath the sharp Salts of the Blood; so as they can't prick, burn, or gall the Parts; and lastly, of such as are opposite in their Properties to the Salts in the Blood: Wherefore the Diet shou'd consist of Barley, or Oatmeal Gruel, Panado, Jellies, with the Juice of Lemons, roasted Apples, light Puddings, Hatch'd Eggs without Salt or Pepper, Tarts of Raspberries, Apples, Plumbs, Currants, Almonds; of Lemon or Orange Cream, Jellies of Apricocks, of Barberries, of Quinces, Goosberries and Pippins; of Chocolate Tarts, light Custards, of Plumme-Burmety, or of Rice Cream; their Liquors shou'd be Water, with a sixth Part of Wine, the Decoction of Hart's-horn, Sley-water, with the Juice of Lemon squeez'd

squeez'd into it, Lemonade, Emulsions, Tincture of Roses, Fuller's *Decoctum Coccineum*, his Decoction of Tamarinds, Sorrel, or his *Portuguese Sherbet*, Pissana and such like: However, it must be observed, that we must not blend their Liquors in such Manner, as to make the Stomachs sick; and therefore if they are delighted with the sour Drinks, they must avoid Emulsions or milky Drinks, 'till the sour has pass'd the Stomach; so that it is not proper to give them milky and sour Liquors in one Day, for Drink; not but that both are proper, but they don't agree together; because the sour precipitates the Curd from the milky Liquor, and it lies heavy upon the Stomach; and moreover, it must be observ'd, that great Quantities of Sours must also be avoided, lest instead of arresting the Blood's too rapid Motion, it should be coagulated and over-chill'd, and then the regular Course of the *Crisis* wou'd be retarded or quite abolished. At how little Value soever Dr. Cheyne sets the Juices of Lemons and Oranges, how many dangerous Diseases soever they are the Occasion of, how poisonous soever they be, nay tho' he would allow neither of them to be salutary, yet a few Pages after, \* he falls in Love with

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em, as the best Promoters of Digestion in some Circumstances; *sibi constet*, is a golden rule: So much for the Quality of the Diet in strong and burning Fevers. It must be observed also, that we must forbear giving too large a Quantity of any Victuals or Drink in these Fevers, we ought rather to stand in giving too little; for as the Vessels are so stretch'd already, as to be upon the point of bursting with the Quantity, abstinence is rather advisable, or however, we shou'd fill sparingly: And lastly, the proper season of Feeding in Fevers is out of the Fit, because in a Paroxysm, the Blood is much raised, and the Vessels at that Time are fuller, and by Consequence they bear Feeding inconveniently.

In others the *Pulse* is weak, tho' quick, and the *Heat* is not much exalted above the natural Temper; nay in some it is less than it is in Health: The Symptoms, tho' numerically the same, yet differ in their Cause widely, namely, the *Ravings* proceed from the Want, and therefore the irregular excursions of the animal Spirits, which Peccury arises from the Viscidity of the Juices; or 'tis observ'd, wherever the Blood is thick and gross, few Spirits are separated, and every Motion betrays their Scantiness; the Nerves also in this Case are relax'd, and become incapable of receiving their due Impressions



pressions; the *Thirst* depends upon a Thick-  
 ness of the Blood, for Secretions are ana-  
 logous, or of a like Nature with the Blood  
 from whence they part, and the Tongue  
 loaded with a white or brown Matter  
 which glews it and the Jaws up, and makes  
 us desire Diluters to wash it off; *Pains*  
*the Head*, or elsewhere, in which the Pa-  
 ents complain of Heaviness, arise from  
 gross and thick Blood sticking, for want of  
 free Passage in the smaller Vessels, and ob-  
 stending the Membranes, and giving us un-  
 easy Sensations: The *Watchings* are from  
 Distension in the Brain rais'd from the  
 grosser Particles lodging and stagnating; the  
 Vessels being thus fill'd, an Uneasiness  
 rais'd, and watchings ensue: The *Urine*  
 pale, because the watry Parts only flow  
 forth, the other not being well digested, no  
 Tincture can be given, for the Colour of  
 our Water depends on the Salts and Sul-  
 phurs of our Blood, well extricated and  
 freed from the grosser and unactive Parts.  
 The *Bleedings* are produc'd in the follow-  
 ing Manner, wherever the smaller Vessels  
 are bung'd up with gross and cohesive Ju-  
 ces, the Blood stops at those Points and the  
 Vessels behind swell, till they lessen of their  
 Thickness, and so crack and spill their Con-  
 tents; *Pimples* and *Spots* are more frequent  
 here, than in burning Fevers, because they  
 depend upon Humors more or less viscid  
 stick

king to the Capillaries, and so puffing the Parts obstructed, or causing Spots without any unevenness in the Skin. *Starrs* and *Tremblings* also are very common these Fevers, and pretty early; for a general Heat or Struggle in the Juices evaporates Spirits, and makes 'em run irregular courses into their conveying Channels, the Nerves; so that when they run into any one more rapidly than another, and fill that Nerve, the Nerve being in its own Man- blow up or duly stretch'd, is drawn back towards its Original and shortens, the Nerve then, to which this Nerve runs, will, at the time being, be mov'd, that is, it will start, and this is the Reason of those jerking Motions we observe mostly in flow- ers in the Wrists, when the sick draw towards Danger. Nor is it uncommon to observe *Inflammations* of a dangerous Sort these Fevers, for the same viscid, cling- ing to the Walls of the smaller Arteries, arrests the Bloods Motion onward, and the Pressure around encreasing hourly, the Part swells, grows red and painful, and if not timely regarded, will impostumate. These Inflammations are reckon'd the more dan- gerous here, because the Want of Spirits, and the irregular Bent of the Blood clash the Views; for who is he, wou'd bleed when the Spirits are few, or who is he that wou'd not avert the Stream from the Part

Part

Part griev'd by bleeding, and lastly who he, who rightly considers these Difficulties that does not tremble at the Danger? The *cold Sweats* are caus'd as the paleness of the Urine is, namely, by an owzing of the thinner Parts from the thicker, as appears by their Separation in the Dish when let out; for the Blood's Texture is very unequal, and moreover from the flagging of the Fibres suffering the thin Parts to glide readily thro' their Out-lets. The Faintness and frequent Swoonings observ'd, are plain Arguments of a Stop of Circulation in the Heart, from a Want of Spirits to those Nerves; which having no Source of Supply from the Brain, must fail of their Function, or Contraction of the Heart. The *Coldness the Back* in this Species arises from a Want of Motion in the Fluids, in which Cessation is produc'd from a very great Obstruction in the Capillaries thereabouts, and a Rest in the Fluids raises a Sensation of Coldness; but if we take a View of this Symptom in the ardent Kind, we shall soon perceive it to spring from a different Reason, to wit, from the Rarefaction of the Fluids all over us, but a Reason here; this *interpolated Motion* is not usual in human Bodies; where some Parts are too much press'd upon by the Juices being too much swell'd up, and filling the Vessels too full, some small ones

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not able to resist this Pressure, and then  
Juices are at Rest there; now Rest  
is an Idea of Coldness; a like Instance  
this appears in Phrenesies, where the  
Blood is hurried about too furiously every  
where, till at last some smaller Vessels can't  
suddenly pass the Quantity pour'd into them,  
a stop is put to the Hurry, and a Stag-  
nation, and next an Inflammation ensue.  
We have been more particular in the Expli-  
cation of the Symptoms of Fevers, because  
you may the better see what Diet or Drinks  
are proper in this Kind. Here it is the  
more generous Meats and Liquors take  
place, and therefore Broths of Mutton,  
Lamb, Chickens, Hens or Capons; Wine  
diluted, and even a Glass of Wine  
without mixture; Tea, Sage-Tea, Harts-  
horn Jelly, with a little Wine in it; Pana-  
das and Gruels with Wine in them; in all  
these the Diet shou'd be thin, but in this  
Species it ought also to be nourishing and  
comfortable; *thin*, because the Blood wants  
dilution, the viscid is attenuated and divi-  
ded by Liquors, which are watry and taken  
down hot; and *Cordial*, because in this  
Reflux the Spirits must be supplied. It is  
worth Observation, that no Physicians have  
hitherto ventur'd upon giving any mineral  
waters of Steel or Sulphur in any of these  
Refluxes; tho' the former have the Power  
of cooling, if they be what we call *Acidu-*  
*la,*



As, such as are our *Tunbridge*, *Ipsley*, and the *German-Spaw-waters*, and the other, such as *Buxton*, *Bath*, or *Aix-la-Chapelle* Waters, are of a warming and diluting Nature: Whether they be afraid of minute Particles in such Cases, I shall not take time at present to determine; but it is more than probable, feverish Effervescences and Struggles do arise from an Introduction of mineral Effluvia, or even Substances into our Mass, for the Struggles rais'd between such out of it, are the most lasting and frightful. In all Fevers which terminate in a *Crisis*, we avoid Flesh-meats, when they be very tender and given in great Quantities, because the Ferment of the Stomach is now depriv'd and very scanty, and because the Fibres of it are too tender, that the Victuals are either thrown up again or downwards, or so vibrated as to render the diseas'd very thirsty. And thus I have shew'd upon a reasonable Foundation the Management of People in Fevers in their Meats and Drinks.

IN *Hectick Fevers* of every Denomination, whether *primary* or *symptomatic*, there is a Sharpness or Acrimony in the Blood, disposing the Humours to melt, and run off thro' every Outlet; namely the Pores of the Guts, and the Kidneys; they therefore waste insensibly, and the Repairs bearing

portion to their Wasting, the Spirits and  
 blood are drain'd, and when they are worn  
 the Thinness of Paper, the Lamp will go  
 Here we meet with the following ob-  
 servables, they have a sharp and biting Heat  
 on them; after Meals they grow hotter,  
 especially in the Palms and Soles; they  
 have a continual Thirst; their Appetite is  
 destroy'd, and they waste daily; the Pulse  
 quick here, as in all Fevers, but grows  
 weaker after Meals; their Urine is general-  
 ly of a flame Colour, and has a Crust at  
 top, and their Bellies are burning hot.  
 This Acrimony is very considerable if the  
 blood is only tainted with it; but when the  
 matter is thrown into the Mass daily from  
 the Lungs, or other Bowels, 'tis  
 irreparable Case. I shall here consider the  
 origin of these Symptoms, that when their  
 manner of being produc'd is fairly stated, it  
 will be easy to know the Diet's Nature and  
 The Quickness of the Pulse depends upon  
 the sharp Particles in the Blood twitch-  
 ing the Heart, and by giving it such fre-  
 quent Twinges, it contracts itself more fre-  
 quently, the Motion of the Spirits becomes  
 quicker into the Cardiac Branches of the  
 Nerves, and this Motion encreases upon  
 feeding, because new Nourishments give  
 new Struggles. Their Appetite is destroy'd  
 because there is a Mean in Nature requisite  
 to raise an Appetite; and this fails, as that,

is lost; Not only the Juices in the Stomach but the Fibres of it also contribute to this Desire; for if the Juices be viscid, there is no twinging, nor consequently any Hunger row'd; if they are too eager, they produce Pains there instead of Hunger; they produce uneasy Heats and Burnings, that nothing is desired or coveted, but will allay this Uneasiness, and therefore is, they cover Liquor to quench this Fire. In Lieu of Victuals, which is the Case we now considering; the Urine has a Crust at Top, as all Liquors loaden with Salts have, and it happens here as it does in crySTALLIZING Salts, the Liquor being vaporated till a Pellicle appears at Top, and, set to cool, crySTALLIZES; and indeed I have seen the very same happen to an hypochondriacal Person, his Urine being set by to let me see it; I was not surpris'd to see a Crust at Top, but thro' the whole Liquor there appear'd such shining, hard and pointed Particles, that upon Filtration, I met with a very large Quantity of Salts, which melted with the Heat of my Hand, and tasted very sharp and saline; can be no surprize then, if in such a State of Blood, where the Acrimony is so great as to corrode the Fibres themselves, that the Filaments of the Blood should also be weakened and corrupted; how can the tenderer escape, when the stronger are demolish'd.

How can sulphurs be safe from Corrosion, when Bones are sometimes decay'd? We have here a short View of what happens in *hectick Fevers*, and also of the *Modus*; let us from thence gather what Diet is convenient for the *hectical*. It is easy to see, they ought to avoid strong Liquors, since even Wine, unless very well diluted with Water, is prejudicial, how then can Brandy Cordials agree? Cordials in this State are only us'd in Paintings to give the Spirits a Hoist; however, we must not be too free, where the State so eminently contradicts their Use; but the Symptom being reliev'd, we must cease from using them, and give them such Victuals and Drinks as will sheath these acrimonious Particles in the Blood and Juices; wherefore such Victuals are advisable, as are said to be easy of Digestion and smooth, the Feet of Animals, as Calves, Sheep and Lamb; Rice, Oatmeal, Barley, in Puddings or Gruel, Sago, Eggs, Milk-meats, Snails, Cray-fish, Crabs, Gellies, Panadoes, Milk, and fresh Fish, which are smooth, such are Whittings, Soals, Flounders, Plaice, and suchlike; and for Drink, Asses-Milk, German Spaw-water, or a Decoction of China and Hartshorn are commended; the Mucilage of the Harts-horn is lost, and obtunds the Acrimony of the Juices, and abates the Heat. I don't know how it is, that Dr. Cheyne here varies so much from himself, he looks

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upon \* glutinous Victuals hard of Digestion, while the † Mucilaginous are reputed easy by him; but these are only Gradations of the same thing, and Dilution makes a glutinous Diet mucilaginous; and therefore, according to him, easy of Digestion; but he who affirms Milk and Eggs, to be easy of Digestion § in one Page, and, a few Pages after, ‡ to lye heavy on the Stomach, and beget Wind; that mucilaginous Food is good to plump us up, that it is soft, light, cool, tender, and already Chyle ¶; but that || Fish is mucilaginous, and yet that it is so hard of Digestion, that it is equally bad as Pork, seems to argue against himself; if Reason won't convince, let Experience be consulted; if *Fish* affords us Ising-glass; Rice, Wheat, and all the mucilaginous Diet afford us Glue; and indeed, if we deprive our nicest and most tender Victuals of their watry Parts by Evaporation, what remains but Glue; consider the fashionable and portable Soop now in use with the Quality, their Cooks make *Olio's*, they strain the Broth, then gently evaporate to a greater Height than for Jelly, they let it cool, and scum off the Fat; this Glue they carry with them, and when they want a Dish of Soop, they call for boiling Water, and dissolve as much

of this Glue as will make it strong enough, and use it for an *extempore Soup*; Water then is the proper dissolvent of such a Diet, and makes the glutinous become mucilaginous, and therefore easy of Digestion; and methinks, if a Division into minute Particles be the Sum of Digestion, a Dish of Tea or Coffee after Fish were better than Brandy, since Mucilages are harden'd by spirituous Liquors. In short, every Diet is good, which corrects the Faults in the Juices, provided the Patient have no Antipathy for the Diet offer'd; there are Circumstances to be observ'd in every Kind of Diet, which if we slight, make the best of Foods hurtful; but there is a Truth yet remaining, which is pass'd by; namely, wou'd it be reasonable the Diet of hectical People should consist of Plants or Victuals very Aromatick or Poignant? wou'd we advise them to eat pepper'd or high sauc'd Meats, or Drink spirituous Liquors? This wou'd be the most ignorant and unskilful Practice that ever was follow'd, either by *Systematicks* or *Aphorists*; and by a Parity of Reason as well as of Experience, we are taught to refrain from glutinous or mucilaginous Diet in oblegmatick Cases, and if we consider that sordid and sedentary Peoples Juices are apt to *turn viscid*\*, methinks a viscid Di-

et is, of all, the most hurtful; and pray what is *Sago, Rice or Puddings, but such a Regimen* \*? Is a Blood vitiated, by being too gross already, to be stuff'd with Victuals and Drink, that will render it more viscid? I say then, and the Physicians of every Age back my Sentiments, that wherever the Blood's Motion or its Qualities are faulty, in Excess or Deficiency, or if its Quantity abounds too much, we must put the Valetudinary or Patient under a Regimen of Meats and Drinks, directly opposite to their present Case; but if the secreted Juices fail of their Quantity, we must give such Specificks as will breed them; and altho' this Supply is of an analogous Nature with the thing wanted, and in that sense may be said to be similar, in its Condition, to the Juice yet as adding is contrary to subtracting; in this Sense the Deficiency is cur'd by a proper Supply; but to be more particular let us suppose the Blood-Vessels are fill'd too much, we must fast or subtract from our Diet every Day insensibly, till we have suffer'd more to run off by Stool, the Pores or Urine, than we have added; do's the Blood move too sluggishly forward, do we not advise the Patient to use such Meats and Drinks as will hasten its Motion? Do

move too fast, don't they advise with us how to arrest this hurry, and don't we order 'em to forbear all spirituous Liquors, and to betake themselves to *Element*? Is it four or salt, do we not presently cause 'em to forbear all salt Meats, and don't we bid them dilute well, and use milk Meats and the like? Do's it ever happen that the oily Parts of the Blood are not well blended with the Serum? Are we not in that Case to administer in Diet and Drugs such Materials as, being hurried round in the Vessels, will exactly cause them to mix? I mention this Case, because I have often observ'd it in, the Cachectical, and in Persons Subject to Jaundices, and in so eminent a Manner, that the Bile swimming at the top will flame at a Candle if scumm'd off; it's not this State argue want of fixt or volatile Salts in the Blood? I think I have said enough to convince any reasonable person, that our Diet must be contrary to the faulty Condition the Blood is under; that it is not only the *Easiness of Digestion* we are to consult in Valetudinarians, but the State of their Fluids; for some humors may be very easy to break into minute Parts; but very improper for the person's Condition, who has swallow'd 'em; I say if this were the whole Stress of the Matter, I don't see why *Hemlock*, *Wounds-tongue*, or *Thorn-apple* might not



make as good a Sallad as *Silesia Lettice*, for the same Element will dissolve them all alike; but then what Consequences do they not draw after them, in a constant and regular Manner? We are therefore indispensably oblig'd to consult the Depravity of the Blood and Fibres, and we are to administer Meats, Drinks and Drugs diametrically opposite to that Corruption: Let *Hippocrates* confirm all I have said on this Head. He \* tells us to use a *Regimen of Diet, and Medicines also contrary to every Age, every Season of the Year, every Nature and every Disease* and elsewhere he tells us, that † *Contraries are the Remedies of contraries*, which *Axiom* seems to be quite neglected by *Dr Cheyne*, as appears in this Paragraph, and will be made manifest in the sequel.

IN *Pleurisies, Peripneumonies, and Inflammations of the Viscera*, an uniform Diet is requir'd. We will take a short View of the Symptoms of some of the most considerable internal Inflammations, and from them plainly shew, which Sort of *Regimen* is convenient for them. In a *Pleurisy* they have first a Pain in the Side, then a strong Fever, the Pulse is strong and hard, the breath short, and have a troublesome

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\* *De Natura Huminis.* † *De Flatibus*

Cough; these are the distinguishing Signs of this Disease, others attending occasionally need not be strictly regarded. This Pain depends either upon the Grossness of the Blood, which in this Disease is visible upon the Cake, of a yellowish Hue, and so rough, that a Knife enters it not without a strong Resistance; which is frequently occasion'd by Over-heats, and imprudently drinking cold Water, or ic'd Wine upon them, or upon the Stiffness of the Parts themselves caus'd by catching Cold or exposing our selves to the *chill Air*; for as our Fibres and Tubes are ductile and yeilding, the Air has a great Force upon them, more especially at their Extremities, where it renders them sometimes too flabby, and at other Times too rigid and stiff, but in either Case the Spring of these Fibres, by which the Blood is syring'd forward, is abated; therefore the Blood will stand still in those Capillaries, and a stop will be put to the succeeding Mass; for which Reason the circumjacent Fibres, on the Side from the Heart, will be inflated, that is, inflamed, as soon as the Inflammation is fix'd, the Fever begins, for then the Hurry commences, and the Blood is hasten'd onwards by the strong Agitation and Compression of the Fibres occasion'd from the Pain, and is thereby divided into minute Particles and rarefied: When the Fluids are brought into this

Condition, it is easy to conceive how the Pulse is enlarg'd and harden'd, for the Blood taking up much more Space than it did in a natural Circulation; it thrusts the Arteries more outwards, by filling them more, and the fuller they are, the harder they grow; and from this same Fulness it is, they breathe short in Proportion to the Quantity the Vessels contain; for the Vesicles of the Lungs grow rigid, when too full, and therefore can't reciprocate the Air.

IN an *Inflammation of the Stomach*, the following Signs are observ'd; a Pain, a Fever, a Swelling, and a Vomiting; this Pain begins in the same Manner as was said in the Pleurisy, and so do's the Fever, and Swelling; and for the Vomiting, we may readily conceive how every thing they take, is vomited back, for how is it possible so sensible a Part as the Stomach is, being very membranous and nervous, can bear the Touch of Victuals or their Pressure without being put into Tremblings and Shocks, that is, into Vomitings; do we not experience this daily in outward Inflammations, how uneasy are the Patients, and how much afraid are they upon the least touching of the sore Part?

IN an *Inflammation of the Liver*, the Signs are, Pain on the right Side, a Fever, a Swelling there, a Jaundice, a difficulty of lying

ing on the Right, and a Vomiting, with dry Cough, and difficulty of Breathing. The Pain, Fever, and Swelling are accounted for as above; the Jaundice depends upon a Stop put to the Secretion, because all the Ducts are bung'd up, and the bilious particles of the Blood must remain in it; and it is some Comfort that the *Porta* is not quite clos'd, for then the Belly must needs swell prodigiously; as the right Side the Part affected, Pressure cannot be agreeable to it: And what is lying on the right, but pressing the Liver with its own and the whole Bowels Weight? The Vomiting from the great Pressure of the Stomach, the Liver, and Diaphragm, and also from the Viscera of the Liver entering, and twinging. The Breath shortens, and the Lungs are affected, if there be no Room or less than usual, in the Belly; for then the Diaphragm is press'd upwards, and can't be stretch'd downwards, and consequently there must be less Space in the Breast for so large Draught of Air, as there shou'd be.

In an *Inflammation of the Kidneys*, besides the Pain and Fever, there is a Vomiting, a Strangury and a Numbness on the side where the Inflammation is; the Vomiting is by the Communion of Nerves; for those of the Stomach and Kidneys come, from their original, wrapt up in a common



Case, so their Affections are in common. The *Strangury* is produc'd from the Heat and Acrimony in the Blood, and consequently in the Urine; the Heat dries up the *Mucus* that lines the Passages, and the Acrimony twinges the barr'd Membranes; and as for the *Numbness*, it depends on the Bulk of the Kidney being encreas'd: That it is so, the Augmentation of Pain, in the Pain upon Coughing and Sneezing, makes it evident.

IN an *Inflammation of the Bladder* the Signs concur; a Pain above the Os Pubis, a Fever, a *Strangury*, a *Tenesmus*, and Redness in the *Perineum* as well as a Swelling: We have already explain'd the Pain, Fever, and *Strangury*; the *Tenesmus* arises from the Communion of the Sphincters, that as they are enlarg'd, they touch and rub upon each other during their Action; and therefore they both act as well as the others may, at once: The Swelling is what attends every Inflammation, which here is visible sometimes.

FROM all this Discourse it seems more than probable, that an *inflammatory Disposition of Blood* depends on a Conjunction of *Viscidities*, and an *Acrimony*; when the Viscid stops any where, the Acrimony excites it self; from the Viscid proceed the

Oppage and the Tumor, and from the Acrimony, the Hurry and every sort of Irritation: Methinks, then, any one skill'd in the *Materia Medica* may readily conceive that sort of Diet Inflammations require; *Diluters* and *Obtunders* are always order'd, that is, thin and mucous Diet is the proper Regimen; therefore Panade's, Water-Gruel, thin Broths, Emulsions, and Jellies, must be their Diet and Drink; and Inflammations of the Breast, Custom has prevail'd to use an Infusion of Horse-Dung Milk or Carduus-Water for Drink, which is good, because it contains nitrous Parts capable of inciding the Viscid, and of correcting the Acrimony: And as cold Liquors, Acids, as viscid, vinous, or salt Diet, increase the State of Blood, therefore it is, we must avoid Lemons or Oranges in their Drinks, too commonly allow'd for the Fever; Mushrooms, Melons, and *Legumens*, such as Pease, &c. are very improper, because they are viscous, and contain a latent Acrimony in them. It is a Maxim religiously to be observ'd, that *Internal Inflammations must never be brought to Suppuration*; for either there is no Passage for the Matter bred, or, however, Parts so sensible and so necessary for Life must never suffer any considerable Injury; and it is observable, that Acids, if homogeneous, will corrode the sulphurous Filaments of the Blood

Blood into Corruption; much less, therefore, ought we, in these Cases, to allow *Spirits of Vitriol*, which the Ignorant are too bold with in most feverish Cases; The mucous Diet is allowable in a moderate Degree only, both for enveloping the Salts and for Dilution of them; the first Property of these guards from the Points of the Salts that they should not prick and wound the Membranes, and the second keeps them at a distance from each other, that they might not jostle and fret in the Vessels, and also hinder the Viscid Particles, swimming in the *Serum*, from combining into too large Clusters.

IMPOSTUMATIONS or Abscesses naturally succeed Inflammations; for when the Parts are so highly inflam'd, that the Blood within certain Limits stands still, and the Fibres are stretch'd beyond their elastick Power, they crack, and spill the fretted Juices into one common Chamber, and there they rest. It is happy for the Diseas'd if the Part were of small Consequence to Life, and if there were any Outlet for it; but this cannot be expected in the Bowels, where the Matter extravas'd lies, and receives Increases hourly, so that not only the Bowel is turned into a corrupted Mass, but the Blood feels the Smart also; for every Minute some Parcel of this Corruption is snatch'd into the Vessels

## *Sickness and Health, &c.* 61

ffels, and being incapable of turning into nourishment, it raises the Fits of Fevers servable in such Patients, and being an exhaustible Source, it may be lessen'd or off by Art ; but, alas ! it can never be in'd: 'Tis this Matter, taking up its Residence in the Vessels, which is ever and on galling the miliary Glands, those of the Intestines, and of the Kidneys, to throw by Sweat, Stool, or Urine, a larger quantity of Liquors than the Patient can ; so that in those Abscesses the Patients have the Displeasure to feel themselves die piece-meal. We will take a short View of the Signs of some of the principal inter-Abscesses, that the Diet may be the more dily agreed upon. In an Abscess of the Liver, and, indeed, in all Impostumations, are to enquire into the preceding Symptoms, where we shall find that Inflammations have gone before: In this Abscess, I the Hectic, the Water, Eyes, and Skin may it ; for if, after an Inflammation of these Signs concur, we conclude on an Abscess of the Liver. I have already accounted for the Fits of Fever ; and the Colour of the Urine, Eyes, and Skin, are from the Stoppage of the Secretion of the Bile, and therefore the Blood being ting'd with Cholera, gives all the Skin the Hue it ; for all our Colour is from the Blood.

IN



In an *Abcess of the Stomach*, an Inflammation has preceded, and the Vomiting with which they were infested whilst it advanced no further, are now loaden with Matter, and sometimes with Rags of Flesh; they have a continual Hiccup, the Fever is slow, the Appetite is lost, and they perceive Pain, and an Inclination to vomit upon the least Morsel or Draught they swallow down. It is easy to conceive the Reason of the Vomiting, particularly upon taking Food; as the Part, to which it is apply'd, is raw and extremely sensible, the least Touch makes it uneasy, and then all the Nerves inserted into it are put into Tremblings and Contractions, so that nothing can be retained till these can act no more, which happens not till the last Moments; and it is as plain that whatever the Stomach has lying loose within it, must be spued forth, and the superfluous Matter, and fleshy Rags will be thrown up. The *Hiccup* is but a Commotion of the Spirits in the Nerves of the inspiratory Muscles and the *Epiglottis*, and any troublesome Sensation in the Stomach and Gullet readily invites this copious Influx into the neighbouring Nerves. And no Wonder that the Desire of Victuals should be quite abolish'd, since the Fear of the Pain ensuing upon swallowing them down, along with either a total Deficiency of the specifick Aliment, or a Depravation of it, makes the

now it down for no other Reason, than  
 prolong that Life, they want to employ  
 good Purposes. In an Abscess of the  
 Chest, called an *Empyema*; Signs of an In-  
 flammation have preceded, which are fol-  
 low'd by Shiverings, a slow Fever, and a  
 swelling of the Spirits, which Symptoms im-  
 mediately accompany a beginning Abscess;  
 soon as it is bred, the Breath shortens,  
 there is a Weight felt in the Breast, Matter  
 heard, upon moving from side to side, to  
 fluctuate and make a Noise like Water in a  
 vessel half empty, they have upon them a  
 slow Fever, their Cheeks are red, they are  
 restless and get very little Sleep; it is to be  
 observ'd, that the Breath shortens more  
 every Day, insomuch as they are ready to  
 choke at last, they often spit up a purulent  
 Matter; but as *Hippocrates* observes, \* their  
 cough is rather dry. The *Shortness of*  
*breath* depends upon the Tension on the  
 Vessels and the Straitness of the Air-Cham-  
 ber for the Pressure is great on the Vessels  
 and Vesicles, and as the Tumour grows  
 greater and breaks, it ouzes large  
 quantities of Matter into the Breast, till  
 the Cavity allows of no more, and then  
 they are ready to choke upon every Motion;  
 that Lobe is become useless, it is a Load,

and feels such to the Diseas'd: The Flo-  
ing is heard only while the Cavity is  
full, for at last it makes no Noise at all,  
cause the Breast is then quite fill'd. The  
Cough is rather dry, because the Ulcer  
on the Inside of the Lungs, seldom in  
*Trachæa* or *Bronchiæ*, and therefore they  
cough up no Parcel of the Matter contain'd  
It may indeed happen, that a small Ulcer  
may be in the Passage also, and then the Patient  
will spit up a little Matter; the Redness of  
the Cheeks depends upon the Fever, and  
do their Watchings and Inquietudes, depend  
on the Acrimony of the Matter, which flows  
in the Serum without mixing it self with

IN a *Vomica*, the Case is chang'd and improv'd;  
ed; for as an *Empyema* is an Abscess on the In-  
side of the Lungs, this is on the outward  
sides of them, and therefore there is a greater  
Analogy between the Symptoms of the two  
Diseases, as there is in their Cause; here they  
breathe shorter daily as it enlarges, they cough  
dry for some Time, till it breaks, and then the  
Matter runs off as from a Fountain, but the  
Fever, the Redness of the Cheeks, the Inquietudes,  
and the Watchings are common to both: As these  
agree in all or most Symptoms, I shall only  
remark, that the Matter in a *Vomica* ripens  
comes off all at once, because it was contain'd  
in a *Cystis* or Bladder, on the Outward

of the Lungs, and therefore finds its Way out, which cannot happen in an *Empyema*, that Matter being contain'd in the Breast, from whence there is no Passage thro' the Channel of the Lungs. In an *Ulcer of the Kidneys*; there is an Evacuation of purulent Matter; their Urine is white like Milk upon making, which a while after settles to the Bottom; there is a Pain on the Region of the Loins, a difficulty in making Water, and a constant Inclination to make it, besides the hectic Fever. It is impossible so sharp a Liquor as Urine is, should pass thro' the Kidneys, without giving twinges, if the parts are depriv'd of their natural Mucus, which even the Veins and Arteries are lin'd with, any sharp Liquor vellicates them, so much as to give Uneasiness; but if they are hard and corrupted, as they are when ulcerated, this Uneasiness arises into Pain, that there is a vehement Irritation raising an Idea of Trouble: Matter and Phlegm differ in their Gravities, because Phlegm swims upon, and Matter subsides in, watery Liquors; in this Case then what is evacuated, is truly Matter, which seems to be the Oils of the Blood corroded by the concentrated Acids and strictly united, there is a greater Analogy between these heavy essential Oils and Matter than is imagin'd, and tho' Matter will neither be coagulated by Fire nor acid Spirits, yet *there is a way by which it will*  
F *blend*



*blend with Water and be united to it, Matter smells strong, so do these Oils; and the Oils taken internally raise a like hurry in the Blood with Matter included in it, as is well known by the giving them internally but their Ungratefulness makes them rejected in Practice. A Strangury and constant Inclination to make Water proceed from one and the same Cause; for the Acrimony by its Irritation, puts the whole Duct upon frequent Contractions and Twitchings, a small Degree of Sharpness gives a Desire to make Water, and a greater a Strangury. In an *Ulcer of the Bladder*, the following Signs appear the Matter smells more than in that of the Kidneys, there is a more constant Difficulty of making Water, and the Pain of the Pass is continual; the Reason of the Smell is the Stay it makes in the Bladder, and the Corruption of the Membranes, as well as the greater Quantity afforded; for the Smell is in Proportion to the Thickness of the Lymph that strikes the Nostrils, as may be known by the same Plant which is sweet scented and stinking at different Times; this Smell is yet greater, when the Membrane is corrupted, as to be thrown off in Scales the nearer the Ulcer is to the Sphincter, the greater is the Dysury, and the more continual is the Pain; for as this is the Passage for its *Exit*, and as the Salts of the Urine and Matter are very sharp, and do lye con-*

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inually upon it; and from the Posture it must  
be so; therefore both are continual and un-  
interrupted, which is not so in an Abscess of  
the Kidneys:

IN an *Ulcer of the Womb*, Matter is  
driven out, they are feverish, have Pain  
in that Region, particularly upon Coition,  
and an Inflammation has preceded, all these  
symptoms are well accounted for, by what  
has been said on other Ulcers: So that it  
may be deem'd as a *general Remark*, that  
*Ulcers* are accompanied with an Efflux  
of purulent Matter and Scales if there is a  
passage for 'em, a Pain in the Part affected,  
particularly if they are rudely handled,  
with a hectic or slow Fever, and with an  
atrophy, and an Inflammation has always  
preceded; the Reasons of all these Symp-  
toms have been fairly stated to proceed from  
Acrimony in the Juices, which first  
are viscid; let us from this Account, take  
view of the Diet necessary in such a State,  
we shall find that *Emplasticks*, *Obtun-*  
*gents*, and *Balsamicks* are necessary; such  
as all Kinds of Milk, Barley Water, the  
Milk of Animals (in Jellies; or otherwise)  
Millet, Oatmeal Gruel, Almond Milk,  
Rhenish Water Fish which grovel about  
swamps, River Crabs, and Mead: And that  
for a contrary Reason, we are to avoid A-  
cridities, hot Spices, salt Meats, Pickles

and pepper'd Meats: These latter fret and gall the Parts too much, they encrease the hurry of the Blood, and invite the Humours to the Parts, and so would indulge that Secretion, which we study to lessen; but the smooth, and soft Particles, we have mention'd, envelope the Salts, retard the Hurry, and prevent all the Consequences such are the Atrophy and Hectick. I am also of Opinion, that in Internal Ulcers a gentle subastringent Diet would be advisable; for as in external Ulcers, where the Part is humid, or subject to great Defluxions, Astringents are to be blended also with common Digestives, so the internal Parts are of this same Temperament; wit, soft, and too capable of Defluxions, they from their Tenderneſs yield too much to an Influx of Humours, and suffer them to run off too readily; and nothing can contribute more to the Hindrance of them than Subastringents; wherefore in all Abscesses allow the Patients the Use of Quince Medlars, Pears, Pomegranates, &c. and Liquors in which Steel is quench'd: And is for this Reason, as well as for Dilution that the light Chalybeate-Waters are advisable; they dissipate the Salts, or divide them and keep them at too great a Distance to tract each other, and they brace up the wounded Fibres, so that they won't give to too great an Afflux or Efflux of Matter.

from whence the Hectick abates, and the Sweats, the common Consequence of the resorb'd Acrimony, as well as the Atrophy from them, do also abate, or at least are ward-  
ded off for a considerable Time: Where the Matter running off is for the Advantage of the Patients, as it is in Vomica's and Pleurisy, we are oblig'd to encourage this Flux and their Astringency is prejudicial at the Beginning, till the Part is thoroughly cleans'd.

IN a *Dropsy* these Signs are observable, in that Species call'd an *Ascites*, there is a soft jutting of the Belly, which swashes upon Motion, the Feet swell, the Body grows lean, a Fever attends them with a Difficulty of Breathing, a Cough and Thirst; and the Urine is always in less Quantity than it should be. The Belly juts, because the Contents are supply'd from the Vessels, which are broke, and the swashing denotes an Extravasation there, the Feet swell, because the Pressure on the Iliac Branches retards the Reflux of the Blood and Lympha; the Leanness depends on the running off of the Nourishment into this Receptacle and emptying the Vessels of their Quantity, which us'd to plump them up, the Thirst also depends upon a want of Liquor in Proportion as it is drain'd; and so does the sparing Quantity of Water made



in the dropfical, as also from the Pressure of the Kidneys, and moreover from the Thickness of the Juices, the Water is also most commonly red, by Reason of the urinous Salts contain'd in it, however in a more waterish State of Blood the Urine is pale. Some hydropical Persons, more especially such as have a red Water are feverish, because their Dropsy proceeds from Salts in the Blood, capable of fermenting, and such also are troubled with a Cough. The Appetite of dropfical People is diminish'd, by Reason of the Thickness of the Juices secreted into the Stomach, which do not twitch it in a proportionate Manner to raise Hunger; 'tis observable that the dropfical rarely sweat, altho' we administer the strongest Diaphoreticks to them, which shews a Grossness and Thickness in the Juices; when the Belly swells much, the Breath begins to shorten, because the Pressure on the Diaphragm hinders its Extension downwards; and lastly, the Legs which swell'd in the Day time settle and fall commonly in Bed, because the gentle Heat of the Bed melts the *Lympha*, and restores to the Fibres their wonted Elasticity, so that they vibrate and drive forward their Liquors contain'd, which then have recover'd their usual Tenacity; from all which it appears that the Blood of dropfical Persons is gross at last; I say at last, because it is certain, that a drop-

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Dropical Blood is not always thick, but very often so thin, that it won't coagulate upon the Fire nor by Acids, just as we experience upon Serum, into which too much Water is pour'd; however in an *Ascites* the Blood and Serum are too thick; and sometimes also too saltish: Hard-drinkers drain their Blood with too constant use of diuretick Wines and Liquors; this Disease is commonly and justly reputed the Disease of Not-Companions; the Breach may either be made by the too great Load in the Vessels, or by the Blood being render'd viscid, and stopping in the Course of Circulation, when the thinner Parts escape thro' the Breach, which is never repair'd: However I have seen Dropsies arise from a very different Cause, namely, from a Blood impoverish'd with watry Liquors: Wherefore according to its different Causes, the Patient ought to observe and follow different Rules in their Diet. In the watery State, they ought to eat Meats roasted very dry, they ought to allow'd Wine in a moderate Quantity, namely, a Pint in twenty four Hours, they shou'd often be allow'd a Draught of *unch*, which is surely the greatest Diuretick, as well as the surest, known in Diet; or can I see any Reason why Dr. *Cheyne* shou'd cry it down as a destructive Liquor; in short its Ingredients are excellent in their kind, and the Mixture well contriv'd for

some Constitutions; for it is eminently ob-  
 servable, that Brandy, tho' a rarefied Oil  
 blends intimately with Water, from whence  
 it may be concluded to contain much vola-  
 tile Salts in it, which gives it the pre-emi-  
 nence to all other essential Oils, which  
 don't blend with Water, without some in-  
 termediate Body; the Juices of the Lemons  
 or Oranges are surely preferable to the Juice  
 of Sorrel, and being blended with the Bran-  
 dy, make the most agreeable *Salso-Acid* in  
 Nature, and on this Mixture chiefly depends  
 the diuretick Virtue; and however angry  
 he seems at these two, yet he approves the  
 Juices of the Lemons and Oranges else-  
 where, and gives us a Tincture, which he  
 praises much, where Brandy or Arack  
 is the Vehicle; which puts me in Mind of  
 one of Mr. *Dryden's* Prefaces, where he  
 tells us, the *Britains* are of so good a Na-  
 ture and Disposition, that what they have  
 to Day, they will clap the next; such Per-  
 sons shou'd live upon Liquors in which  
 Broom Ashes are infus'd, this Liquor be-  
 entering the Blood, becomes also *Salso-Acid*  
 and by consequence diuretick; they must  
 religiously shun all Milk-Meats, and flatu-  
 lent Diet, such as all the Legumens, Pease,  
 and flatulent Roots, such as Parsneps, Turneps,  
 Carrots, their Sallads ought to consist of  
 Nasturtium's, Horse-Radish, Mint, Bawm,  
 and such warming Things.

For the other Persons, whose Blood is *viscid* and *salt*, they ought to use a Diet that will attenuate without heating them, their Meats ought to be of young Animals, and of such a Nature as will be easily digested, such as Poultry, Veal, Mutton, and Lamb, dress'd with antiscorbutick Sallads of Endive, and Succory; their Liquor may be made well hopp'd, in which you may put Elder-Flowers, or Water-Cresses: I find Ale with Dr. *Cheyne* is reputed a sorry Liquor for Valetudinaries, because it may be boil'd into a Plaster; little considering that the same may be said of all the farinaceous Diet, he is so fond of thro' his whole Performance; what is Flummery but a Jelly of oatmeal, which may be boil'd up also to what harder Consistence you please? Eggs, how easy of Digestion soever, may they not be brought to what Hardness you please by Fire; and if we are always to consider how Fire will alter our Meats and Drinks in their last stages, I am afraid we must starve ourselves with an over Caution. It is sufficient a Physician considers of what sensible Parts the Diet is compounded, and that he adapts it to the present State he is attempting to alter, all other Considerations are foreign to the Affair in Hand. There is another Species of Dropsy, call'd an *Anasarca*, in which the Skin by pressing it hard with your Fingers, will leave the Marks of the Impressi-



on, like Dough; here the Fluids, and particularly the *Lymph*, do's not circulate, and the Fibres are too much relax'd, so that being incapable of due Contraction, the Joints grow thick, and stand still, or at least move forward very slowly, the Parts are also very pale, because the Blood is such; from these distinguishing Signs it plainly appears, that the Blood is gross, and the Fibres too loose, so that the Diet must be attenuating and subastringent; wherefore vinous Liquors, high Sauces, juicy Victuals, and the strongest atramentous Waters, such as *Knaresborough* or the like, must be made use of; therefore pepper'd, salted, and spic'd Meats are of Use; red Wine of all the others is most adapted, because it attenuates the Humours by its spirituous, and contracts the Fibres by its astringent Particles; it agitates the Mixture into a due Thinness, for Agitation or a gentle Heat attenuates mucous Humours, and Wine mixes with them intimately: This Article of Mixture ought to be very well weigh'd, because I am afraid our Cooks are often injudiciously contriv'd; and how should it otherwise be, when such poor Creatures are left to manage the grand Affairs of Life? we live upon a vast Variety of Foods, and the Particles they are made up of are so differing in their Natures, that they won't unite in our Vessels: How can the watry for Example, and the F

within us? Surely they want some immediate Substance to combine them; not more agreeably or more surely unites oily, watery, and saline together than Yolks of Eggs, so that I wonder they are not always, as they are indeed very often us'd in Sauces for the compassing this Design.

In a *Jaundice* we meet with the following Signs, there are a Weight on the right side, a Yellowness on the Whites of the Eyes, the Face and Skin, a Looseness, Colick, an universal Langour, a Difficulty of Breathing upon Motion, the Urine is of a Mum-colour, a little in Quantity, they have a Dulness, an Itching; all which may be readily explain'd; for the Weight is from Matter stagnating on the Part, which proceeds from the slow Motion of the Fluids thro' the Vessels, and from hence there is an accumulation of Humours, and a Load is felt: The Yellowness from the intermediate Degree of Frangibility; for the denser a Body is, the more is less refracted, but Yellowness is next to Redness; however, it proceeds from the Retention of the Bile within the Vessels; for in two Hours two Drams are known to be retain'd, that is, six Ounces in twenty-four Hours, which is mainly emptied by Urine, and makes it so thick, muddy, and of a yellow colour'd. The loose Stools depend on

on the indigested Chyle: There is in Chyle unmix'd with the Salts of the Bile, a tartareous and relaxing Acid, which gently irritates and promotes Stools: The Colour arises sometimes from *Varices* on the Vessels but more commonly from the Viscosity of the Juices fermenting and lifting up the Bowels. The Languor or Faintness, proceeds from the Chyle's passing off and depriving the Blood of its Nourishment, also from the Viscidity of the Juices in the Vessels; for their Spirits are never separated. The Difficulty of breathing, is from the Retention of the Bile, which fills each Segment of the Vessels fuller than they were designed, and this Retention depends on a Viscosity in the Juices, which hinders them from being separated into their fine Capillaries. The *Colour of the Urine* exactly imitates the Colour of the Bile, and is therefore found in the same Quantity, because the Serum is thickened and render'd unfit for Secretion. Persons seiz'd with Jaundices are heavy and dull, because the *Idea's* bear a Harmony with the Tenuity and Motion of the Blood and Spirits; if the Spirits are few, the Blood is gross, and the Motion too slow, so that a good deal of it is brought to the Cortex of the Brain, without being able to pass to the Centre, it therefore stagnates there, and loads the Brain, and produces a Sense of Oppression, an Impotence to Motion, and all the

slow Idea's: If there were no Truth in  
s, to what End have the Physicians of all  
es mark'd out the Temperaments, or to  
at Purpose do they advise the changing  
e State of Blood and Spirits in the several  
ecies of Madness? From all this let us  
ge a view of the Meat and Drink proper  
be administred in a Jaundice: In such a  
undice, we must observe to avoid all that  
ll thicken the Blood and Juices; and there-  
e Brandy Drinkers are very subject to this  
sease, because, we observe, that if Bran-  
is blended with the Serum, it hardens in-  
a Jelly, and I have often observ'd in Per-  
ns dying of a Jaundice, follow'd by a Scir-  
s and a Dropsy, that their Livers were  
arden'd irreparably by the too frequent Use  
it. Considering that Brandy is a fine  
il, and a volatile Salt, it may be ask'd me,  
hy it jellies our Juices? But if we con-  
der how the same happens by the Fire, or  
excessive Motion, we may conclude by Ana-  
gy, that the active Particles it consists of  
use a Motion in the Serum, and evaporate  
o many of its watry Parts, as to leave it a  
elly: But it is to be observ'd, a certain Pro-  
ortion is requisite to produce this Effect;  
ve are not therefore to blame the Use of a  
liquor, because it may be abus'd; Wine is  
Cordial of the first Rank, but Cordials  
hemselves will destroy: It is the same in  
ur corporal Affairs as in moral, Frugality  
is



is commendable, though Avarice be a Vice, and *Omne nimium vertitur in vitium*; short, the strongest Attenuants, such as volatile Salts, continu'd to Excess, produce Rheumatisms; for if they are given moderately, they excite a Motion in the Fluid and throw off a good deal of superfluous Serum, by the Pores or Kidneys, and thereby being effected, the Blood is rid of its Clot and circulates as well as ferments duly; but if we exceed in their Use, too much is drained, and then the Salts and Oils come too close together, and Coagulations ensue. Physicians, as well as Patients, are willing to continue in that Road they find Relief by, but whoever over-act their Part, must suffer like the Gentleman of *Pisa* \*, who was never contented to be well, but wanted still to be better. When Patients are set to rights they ought to be cautious how they tamper farther, because there is requir'd a just Proportion of Tenuity or Consistence in the Juices, beyond or below which Health is destroy'd: And we have no other Signs of Health, than that all our Functions go on in a regular manner, as they us'd to do; viz. our Appetite is good, our Digestion is quick enough, and our Stomachs easy, our Stool

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\* Essendo ben, e volendo essere meglio, sto qui. An Epitaph the Gentleman order'd to be written on his Grave-stone

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regular and of a proper Consistence, our Urine bears a Proportion with the Liquors we swallow, and is of a nice amber Colour, the breath easy upon Motion, our Pulse is natural, we move briskly, and walk without trouble, and we have no Pains about us; when, I say, we have brought our Patients to this pass, why should we insist longer on Medicines? If we do, it will be at their Expence of Pocket and Health. I hope the Reader will pardon this long Digression from the Subject in hand: Such Ictical Persons then must also avoid, for the same Reason, all viscous Diet, such are Fish of all kinds, Legumens, as Pease, and all things made up with Honey or Sugars, all Things over-sweet are viscous, as they do not boil Syrups are sensible of; and as Excess in Diet occasions a Viscidity, the Stomach not being capable of digesting all we swallow, it must also be religiously avoided. Having remark'd what is dangerous, it will be easy to conjecture what Diet is proper, if viscid Meats and Drinks are to be avoid'd, we must use such as will attenuate, at least, will afford little of the Viscid: therefore, the Diet consist of Meats season'd with Spices; by this Artifice we nourish, and, at the same time, alter the State of the Juices; and our Liquors ought also to be medicated with proper Ingredients; therefore well brew'd Ale may be their Liquor,

quor, in which you may infuse Turmeric, the Aperient Roots, Fumitory, Steel, Cardamom Seeds, Horehound, the greater Cardamine, Sassafras Wood, Guaiacum, Ground pine, Agrimony, Daucus Seeds, Monarda, Rhubarb, Flowers of St. John's Wort, Madder, and Materials of such kind, will gently attenuate without giving too great a Disturbance to the Blood, and therefore such as will gradually dig down the Obstruction. But, as the Causes of Jaundice are not uniform, this Management will not be always convenient: We must, therefore, change it for a contrary one: For Example, if the Jaundice depends upon an Inflammation as it often does, the attenuating Diet wou'd exasperate it, and in this Case all the thin and watry Meats and Drinks only are conducive, as I have already remark'd. If this Disease depends on a Stone sticking in the *Ductus Choledochus*, then the Diet must be very different from the former, for the most Part; because it be a large one, insisting upon an attending, and in this Case a forcing Diet, wou'd make the Fibres too tense, and wou'd perhaps inflame them, and so bring on an additional Disease, which without all peradventure wou'd make the Case deplorable; for as the Diet must be contrary to the Disease, as well as the Medicines, surely equal Care ought to be taken of it as of them: Here then

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must insist on a smooth and diluting *Regimen*; therefore Artichokes or Asparagus dress'd with Butter or Cream, Almond Soulder, Cream and Milk, all Nourishment drawn from Barley, or other Grain; Beets stew'd or fricassied: Butter'd Loaves, Milk Chocolate, Soup of Cray-fish; all the Diet of Creams, poach'd Eggs, Mead, Panada, Pease-Soups, Tripes, Turnip-Soup, Seal-Broth, and such like; these glib the Passages, and wash off the Stone, both which are necessary jointly.

IN a *Cholera* these Signs are observable, they belch and vomit Choler upwards, and have cholerick Stools, they have violent pains in the Bowels, are very thirsty, have no Appetite, their Pulse is quick and weak, and their Sweats are mostly cold, but hot whilst their Vomiting is recent. They are subject to Faintings or Swoonings, and Deaths are very common. When there is a struggle in the Stomach between the contrary Particles lodg'd there, the Walls of it are twitch'd and contracted, and the Steams being light, and being near the upper Part of the Stomach, easily find a Passage out in belches: But if the Humours also ferment very much, they necessarily gall and vellentate the sensible Coats of the Stomach into Contractions all Ways; then the Humours are thrown off both upwards and down-

G                      wards,



wards, because the Irritation is very violent. It is very observable, that *Cholera's* reign mostly in *August* and *September*, when Cucumbers grow cheap and plentiful, and we remark the poorer Sort live upon them as Diet; then it is we observe the Weekly Bills to mount up to seven Hundred, and yet the Gentlemen of the Faculty find no Encrease of Business, because they are mostly poor, indigent Creatures who are then sick, and such as apply only to Apothecaries, and have no Assistance at all. As to this Fruit, its Juice expos'd to the Air dries into a Gum, and all Gums are found to contain an acid Spirit and an Oil, more or less homogeneous, more or less crude; and as the Stomach soon dissolves this, these are apt to fret, and from this arises this Corruption so observable in this sort of Diet: How is it possible for Juices should ferment in our Stomachs, without irritating those tender Membranes into Spasms and painful Contractions? But suppose these corrupted Juices do not lodge there in plenty, for the first or second Vomiting generally empties all that is there, yet these Strainings draw more into the Stomach from the Blood, which is even sharper than they: And thus the first *Nisus* is the Cause of a second, and the second of a third; finally then the Bent of the Humours is hurried that way, where it first began; and is continued, till, by Art, or some other Change,

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They are check'd. The Thirst, Quickness of Pulse, and warm Sweats, depend upon the swift Motion of the Blood and Spirits, so that the Heart is frequently irritated, the blood is hurried about, and so passes thro' the Pores, or elsewhere, and drains the Mouth of *Saliva*; for Nature cannot supply the natural Secretions and the preternatural evacuations at one and the same Time: Hunger depends upon an Irritation, but there must be a proportionate one, not such as sets the Stomach. Now here the Humours are too acrimonious, and too much corrupted, for producing Hunger. Faintness and Swoonings are Consequences of the immoderate Evacuations, which have so exhausted the Spirits and relax'd the Nerves, that the Blood flags in its Motion, and at last stands still, and then the cold Sweats, and at last Death take them off. It is to be observ'd, that the same Species of Irritation produces a Vomiting and a Flux, only the former is greater. From these Observations the Signs and their Causes, we may readily perceive, that the Diet in this Disease ought to consist of Meats and Drinks which are mild and Acrimonies, and which are *subastrin-*gent; the former alter the Texture of the Humours, and the latter close up the gaping Mouths of the Stomach-Glands: Wherefore Gruels of Barley, Panado's, Broths of Chicken unsalted, of Veal, Jellies, Spaw-Waters,

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Waters, Quinces, Pomegranates, Almonds, Milk, and Claret-Possets are conducive; but as the Stomach checks at every Draught or Morsel, very little of any Thing must be swallow'd down at once. All fat, sweet and poignant Diet must be avoided, as well as Milk-meats, Summer Fruits (Melons, Cucumbers, &c.) Fish, and Swines Flesh, as also all crude Diet, and generous Wines, Honey and Stum: Because these are apt to turn sour, and to take up a great Space while they are fermenting, and also contain a great many Particles of differing Natures, which raise a Tumult, and fret the Stomach in Evacuations.

IN a *Consumption*, several Signs concur, and as it varies from it self, we shall take a view of its different Species, in order to determine the Nature of the Diet to be us'd in them. The first sort of Consumption is call'd an *Atrophy*. In it the Persons waste away daily, their Flesh grows soft and flaccid, their Spirits fail, their Pulse is weak, as *Celsus* has it, \* *Fit naturaliter semper quibus decedentibus, nullis vero in eorum locum subeuntibus*. It proceeds then from a *Penury*, but what first introduc'd this

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\* It is occasion'd from some Parts always going off, none succeeding in their place.

city ought to be well consider'd: *Atrophy's* have two general Causes, either there is too great a Consumption of the Juices, by Fluxes, Pains, Watchings, Vomitings, or other exhausting Causes, or their Repair is more sparing than it should be; for it must be consider'd, that we are not nourish'd by what we take down, unless these Victuals be thoroughly digested. Let us therefore take a view of Digestion, because we shall then the more readily know why we are or are not nourish'd. Whatever is taken down should, if hard, be well chew'd and mix'd with the Spittle, for soft Victuals are as good as if already chew'd; the Spittle and Juices in the Stomach, with the Liquor we swallow, ferment what is taken, and the Pressure of the Stomach and adjacent Parts embraces and squeezes the harder Parts, so that the Juice is entirely drawn out of the Fibres of the Victuals, and is then also *fermented to a certain Pitch, agreeable to the Nature of the Person to be nourish'd*. If then the Juices of the Blood and secretory Ducts are stock'd with Particles too active, or if the Victuals themselves are of too stirring a Nature, then the Chyle will be too high digested, and the Blood will be too hot, and then Diseases of an acute Nature will ensue. If the Victuals and Juices of the Stomach are both of an inactive Nature, then the fibrous Parts of the Meat will lie untouch'd, nothing will



be press'd out of it, either by the Stomach or by the Juice of that Organ, and therefore will pass down in undigested Stools; the softer Victuals and such as are call'd easy of Digestion will remain in the Stomach without proper Fermentation, and will grow putrid, corrupted, and sour, as it would if expos'd to the open Air; and then Colicks, Winds, Night-mares, Belchings, Convulsions, Scurvies, and a long Train of Diseases of a cold Complexion ensue: But if the Stomach and Juices of the Blood be well constituted, that is, if the Fibres of the Stomach be tense enough, if the Juices of the Mouth and Stomach be of an exact Degree of Mixture, let the Victuals be never so hard, they will be digested; however, in such a case, it is better to give the Stomach as little Trouble as may be, and we must observe then also to administer Victuals as temperate as can be, that is, it must neither be salted, spiced, nor must it be watry or insipid, for so we shall gradually spoil the Stomach and Blood. 'Tis true enough that the low and watry Diet gives the Stomach less Trouble than the high and spic'd, but then it loads us with Diseases of a chronic Nature; so that in Health it is difficult to observe a *Mean*: Nay, I may say, it is even hard for the Physician himself to discover it. If Persons have exceeded on either side for a while, they are oblig'd

change, till they have reduc'd Matters to  
 ights. The short of the Whole is this; If  
 Person in perfect Health, as must be known  
 by all the Functions being in just Order, and  
 their being void of Complaints, eats or  
 drinks too high or too insipid Diet, for any  
 time, he will necessarily grow distemper'd;  
 and, as no one falls sick of a Disease sudden-  
 ly, the Blood grows deprav'd by piece-meal,  
 and then the Person is become a *Valetudi-*  
*narian*, which is but another Term for a  
 lazy Constitution, and which Condition  
 seems to be a *Half-way* between Sickness  
 and Health: As therefore Valetudinarians  
 are dwindling into Sickness, it ought strictly  
 to be regarded from what Cause their Cra-  
 ziness proceeds; and as this Cause differs,  
 and is far from being always the same, in  
 such Persons, so it must necessarily follow,  
 that the Diet or *Regimen* must be chang'd  
 and varied, as the Cause differs: Or, as *Hip-*  
*ocrates* words it, must be *contrary* to this  
 Cause. It is certain, were we to amend  
 this Constitution by Medicines, we should  
 administer such as we know to abound in  
 particles directly opposite to the Cause of it:  
 and must we take a greater Latitude in Di-  
 et? No; we are there also to avoid any  
*Regimen* that will enhance that ill Disposi-  
 tion and Habit.

HERE it is Dr. *Cheyne*, in my Opinion which I refer to sounder Judgments, is much overseen. *He takes a valetudinary State to be uniform, and orders his Regimen accordingly*: For Example; he tells us that Fish is a bad Diet for Valetudinaries (*p. 40*). He advises Sago and Rice to the Sedentary (*p. 34.*) He says, *all* nervous Distempers are from Relaxation, (*p. 117, 136.*) He blames Oranges and Lemons, as the Authors of Colicks, and other nervous Distempers. He advises against Ale, as fit for nothing but a Plaister, (*p. 60.*) These instances are gather'd out of many more: Now I ask the Doctor, whether there are not many *Valetudinarians*, whose State of Blood may be amended by a Fish-Diet? Pray, are not Cray-Fish Broths advis'd in Hectic Constitutions? Are not Fish a glutinous Diet, and are they not proper in spitting Blood, Empyema's, or Consumptions? Do we not use the milder sort in Strangury? Again, are not Sedentary's apt to have gross and viscid Blood? Is not Rice, is Sago, a viscid Diet, and is a viscid Diet proper for a viscid state of Humours? If nervous Distempers proceed from Relaxation, how comes it to pass, that he reports Hysteric Cases to proceed from Contracting (*p. 132, 216.*) And why are Lemons the Cause of so many Disorders, while they are the best Digesters? (*p. 62.*) Watry

Each are weak, and wou'd he advise such to  
rink Water? Ale is smooth and farinaceous,  
and he advises such Diet every where; what-  
ever Properties Ale has, these have the same,  
and therefore they are either good or bad alike.  
There is indeed no Uniformity in Consti-  
tutions, there is a vast variety in Sickness,  
and when we begin to feel our selves disor-  
der'd, it is our Business to inspect into the  
particular Nature of the deprav'd Constitu-  
tion, and to prescribe a proper Regimen for  
it, which cannot be the same in every indi-  
vidual. Pardon this Digression; but as it  
gives us a Light into Digestion, we may  
see why we are or are not duly nour-  
ish'd; if we give too thin, too hot, too  
gross, or too cool Diet for the present Con-  
stitution, we are badly or not nourish'd at  
all; nay, what is worse, we are hurried in-  
to Diseases. In an Atrophy therefore they  
are consumed every Day insensibly, because  
their Nourishment is either carried off some  
other Way, or because their Digestion is  
bad, that is, if it be too high digested;  
Sweats, Urine and Stools are increas'd by  
the Acrimony of it, or if it be too low di-  
gested, little or no Juice is extracted, but  
the Fibres are still full of their Contents,  
and the peristaltick Motion carries all down  
in this Condition, or what is extracted is  
too gross to enter the Lacteals, and is there-  
fore carry'd off in Stools, or if any thing is  
carri-



carried into the Blood, it is an unac-  
 Mass, and produces Cachexies : Thus  
 Spirits are bred, nor can the Muscles ex-  
 themselves; in short they waste, becau-  
 there is no Supply, and they are feel-  
 for the same Reason. In this Case the No-  
 rishment must be adapted to the pre-  
 Condition ; and therefore a Supply is nec-  
 sary, but it must be consider'd *respectively*  
 that is, if it be a *natural Atrophy*, we must  
 administer Food that is soft, smooth, wat-  
 and oily, or, in short, such as will supply  
 Chyle, without too much Poignancy or  
 Flatness ; hence Milk, and Milk-meats, Je-  
 lies without Sours, Chocolate, Sagos, Ro-  
 Meats, peatch'd Eggs, Caudles, Broths,  
 Creams, Almond Puddings, what the Cook-  
 call Leaches, and such like : This Diet ought  
 to be in such plenty, as to dilate the Vessels  
 let not the Chocolate or the Almonds be  
 any blame in this *Regimen*, for being made  
 of Nuts ; for Chyle must be oily as well  
 watery, and where that is wanting, we  
 Matter from whence we borrow it ; do but  
 blend it with an intermediate Body, and the  
 Business of Fermentation will go readily  
 forward.

THE second Sort of *Consumption* is  
 original one, or an Ulcer of the Lungs,  
 has the following Signs ; a dry Cough,  
 stuffing on the Breast, a Vomiting and He-

begin it ; then while it encreases, these  
ns continue, and the Patients begin to  
ste ; in the next Place the Lungs are in-  
n'd, and the Patients have a Peripneu-  
ny ; and lastly, the Lungs are ulcerated,  
they Spit up a greenish and stinking  
atter. Matter never gravitates, but when  
erches ; and therefore there is some Stop  
Motion at the Lungs, which makes this  
ffing and Load there ; the Lungs being  
dered in their Play, betray their Indis-  
tion by a Cough, because they fall  
wn faster in such a Case than they were  
ed up, and a sudden Contraction in them  
Cough ; the Gullet and hinder Part of  
*Trachæa* being contiguous, if this is  
ly shock'd, that will also suffer ; and as  
Gullet and Stomach are but one conti-  
Organ, the whole also is disorder'd ;  
ever the Blood is sharp or acrimonious,  
Spirits are of the same Indisposition, so  
the Heart will be mov'd, as those  
ve ; but in such a State they are hurrie'd  
ward, and therefore the Heart will also  
mov'd swiftly, the Pulse will be quicker,  
the Blood hotter, that is, we shall be  
tical ; that a Hectick do's not always  
end upon an Emptiness of the Vessels  
ears first from consumptive People bear-  
large Evacuations at the Beginning ;  
where do we ever meet with a Con-  
d Heption cur'd without Evacuations and  
Revul-

Revolutions of every Kind? And second from the Hectick's encrease, when we fill the Vessels with spirituous Liquors, for Emptiness alone were the Cause, filling alone is the Remedy; and if the filling may be circumstantial, so must the Emptiness; therefore it will only prove to be a partial Cause, which is certainly true; for if the Blood be sharp and the Vessels not quite fill'd, the Mass has Room to ferment, and the Salts will be extricated, and exert their Force against the Sides of the Vessels, pricking them, and causing them to contract swiftly; the Remedy of Hecticks makes this reasoning apparently good, for diluting the Salts and blunting their Edges takes it off. The Encrease of the Disease, where Sweats and Urine are hurried on, makes the Point good, for there the Blood becomes sharper and hotter, and the Patients recover because the Acrimony is always at work on the Skin and Kidney-Glands. When an Obstruction is confirm'd, and the Blood stagnates still any where, it grows sharp, and irritates the Vessels, so that the Blood is invited to the Part affected, and finding no Passage swells all the circumjacent Parts or inflames them; and when the Vessels can hold no more, they burst, and make an Imposthume in which all the fibrous Parts of the Blood and Serum are shatter'd into a white, green, or yellow Matter. From this short

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In original Consumption the Diet may be guess'd at, for as the Blood is sharp follows, that we ought to feed with a soft and diluting *Regimen*, and to avoid Acids, all hot Spices, all spirituous Liqueurs, and 'Diet; sweet Jellies, potch'd Meats, Cray-fish in Soops, Milk, Emulsions, Ale-Water, Rice-meats, Whey, the Flesh of Animals, Veal, and young Meats, Green Fish and Puddings are commendable, Pickles, Meats salted or smoak'd, Onions, Pepper, Ginger, strong Liqueurs, or great plenty is dangerous.

THE following Symptoms are observable in a *Dysentery* or bloody Flux, Humors tinctur'd with Blood or Matter are thrown off by Stool, the Patients are violently grip'd, they are feverish, the Pain is most felt in one Spot; in the first Degree of it, the Excrements are fatty, in the second slimy, and in the third fleshy; to these Signs many more are added; Blood is thrown off, because the Vessels are consum'd by the Sharpness of the Humors; the Gripes arise from the same Sharpness, fretting the Guts into Convulsions; the Fever proceeds from this Acrimony in the Blood-Vessels, twitching the Heart and Arteries into frequent Contractions; the Pain is felt in one Spot most, because one Part only is consum'd and ulcerated, and whenever any thing passes by that



that Part, it will be twing'd, as we experience in external Ulcers when rudely handled; the Degrees are easily guess'd at, the Matter lodging on the Surface of Guts, must be first thrown out; then Mucus that lines them, and lastly the ulcerated and corrupted Flesh from the Gut, which last Degree shews the difficulty of Cure, particularly if the Flesh be black, a cause that denotes a Gangrene; the *Weakness* depends on the swift Motion of Spirits thro' the Brain; the *Anxiety* proceeds from a Stagnation somewhere about the Heart, which depends on too great a Load to be hurried forward; the *Tenesmus* denotes a constant Inclination to go to Stool denotes so great an Acrimony somewhere about the *Levator Muscles* of the *Anus*, that the Sphincter's Force is conquer'd by it; sometimes there is a Vomiting, especially when the Gripes are violent, from an Acrimony residing also in the Stomach, and twitching it; the Urine is red from a Load of Salts in the Blood; and *Thirst* is a Sign that these same Salts twitch and dry the Jaws; a *Difficulty of Breathing* arises from a Plenitude in the Vessels, which springs from the Rarefaction of the Blood and Fluids, which straiten the Air-Chamber and hinder a sufficient Admission of Air to expand them: And lastly, a *Faintness* is always observ'd, by Reason of the Expense

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Fluids daily carried off. From all this it  
appears that obtunding and subastringent  
Foods and Drinks are requir'd in a bloody  
flux; the first regard the Humors, and the  
second the Fibres; wherefore Eggs, Rice,  
Oatmeal, Barley, and Wheat, and Feet of  
Animals are convenient; and for Liquors it  
ought to consist of white Decoction with  
Rmentil Roots boil'd, of Cinnamon boil'd  
Water and red Wine, of Emulsions made  
with sweeten'd Water; and we must religiously  
abstain from all salted or smoak'd Meats,  
and from Summer Fruits, which often produce  
Dysenteries, and from spirituous Liquors, all which  
are known to irritate, to ferment and breed  
Dysenteries. What I have said of a Dysen-  
tery, may in a less Degree be affirm'd of a  
Dysentery, which therefore I forbear to  
mention.

In *Colicks* we observe the following  
Signs, a Pain wandering or fixt in the Bow-  
els, a Swelling all over the Belly, and a  
Tumescence; these are the common Signs,  
but they vary, as does their Cause; and  
therefore Colicks are infinite in Number,  
the most common are the flatulent and hy-  
stric; I shall first speak of the *flatulent*  
Colick, and here it is observable, that the  
Pain is not much fix'd, unless it be obsti-  
nate, but wandering, with a grumbling  
Noise; the *Colon* is stretch'd and swell'd all  
over

over the Belly, and feels like a small A  
laid a-crofs; these Patients are reliev'd  
voiding Wind upwards and downward  
they are troubled with Vomitings and C  
tiveness in Proportion to its Duratio  
The wandring proceeds from the Wi  
jumping out of one Cell into another  
the Gut; the Swelling is from the Sp  
taken up by these Winds; for when Vapo  
are rais'd from Water, they occupy a  
greater Space, and the same may be  
of Steams from our Victuals, or the  
cus of the Intestines; the Vomiting is fr  
the inverted Motion of the Guts, which  
usually contract themselves from ab  
downwards; but as the Excrements  
stopp'd, and the Pain, from Distensio  
violent, the animal Spirits are driven  
a Confusion, and determin'd by the  
into the Stomach and Muscles of the B  
the Belchings are only Escapes of ferm  
ing Liquors thro' the Gullet; somet  
there is a Pain observ'd on the Loins  
the Tension of the Muscles, and par  
larly the Tendon of the Transversal  
the Hypochondres are always stretc  
when it becomes chronical, the Pain  
for then the Part affected becomes habi  
ly distended in the middle, and contr  
at each Extremity, but more on the l  
Parts, so that the Wind cannot find a  
Passage; the Urine is red, and deep

our'd in such Colicks, where sharp or Sea-  
 salts reign in the Mass; but pale and phleg-  
 matick Persons, from the Viscidity of the  
 Juices; the Extremities are often cold, from  
 the Expence of Spirits, and slow Motion of  
 the Blood, occasion'd by the Evaporation of  
 five Particles in them, by Reason of the  
 duration of Pain; the Fæces in this Colick  
 are frothy, because whatever is taken, is  
 fermented into Bubbles; in this Case the  
 Stomach is weak, or the Victuals are of a  
 bad Disposition, and somewhat acrimoni-  
 ous, or the Ferment is too weak, so that the  
 Stomach can't sufficiently attenuate the Vic-  
 tuals, or they are of themselves too tenaci-  
 ous; upon either Account *Poignants, Bit-  
 ters, Aromatics,* or *hot* Diet is convenient,  
 because it strings up the Fibres, and makes  
 them closely embrace the Meat and Drink,  
 and so helps to extract the Tincture of them,  
 attenuates the mucous Parts of the Vic-  
 tuals, and so exhales the Flatulency of  
 them; none, surely, will in these Valetudina-  
 rians, advise the farinaceous and flabby Ve-  
 getables, or pure Element alone; *Bath-*  
*Waters* are too serviceable here to ad-  
 vise that, and the Element is only a Vehi-  
 cle for their exagitating Parts. If this is  
 the Fact, why are bitter Infusions, with  
*Bath-Waters* drank upon them, deem'd so  
 profitable in such windy Stomachs? But  
 because these Medicines attenuate, divide

H

and



and exagitate the *Mucus* in such Stomachs because they help to add self-moving Particles to the Victuals, and dry the *Fibres*, and because they help to invigorate the peristaltick Motion, and send the Contents forwards without stopping in this *Recevoir*, and putrefying there. Here then it is of experience'd Use to give the Patients Diet of easy Concoction and of good Nourishment to allow vinous Liquors, and sometimes spirituous, to insist upon Meats high-season'd with Pepper, Cloves, Mace, Cinnamon, Nutmegs, and Ginger, and to avoid all Legumens or Pulse, all Fruits, sour Liquors, or such as are apt to turn sour; to avoid Malt Liquors here is certainly very proper, because they are mucous and acrimonious, and readily ferment into Wind, the Air-Pump proves to the Eye; Cyder and Perry's must for the same Reason strenuously refus'd them, for they are very full of Wind. But in a *hysterick Colick*, the following Signs concur, the Belly is generally Costive, they have violent Pains near the Navel, which are fix'd, they are little or not at all eas'd by evacuating Wind, the Belly is lifted up as if by Jerks, they have hysterical Symptoms upon them elsewhere and any Fit of Grief, which is their *Foible* exasperates their Pain; the Costiveness depends on an acid *Mucus*, lining the whole Channel of the Guts, so that they are

ed into Spasms and Contractions, and these make Stops of the *Fæces* there; from this same Humor it is, that they suffer racking Pains; but also the Humor is so pinching as to invite an Afflux of animal Spirits thither in a tumultuous Manner, so as to jerk up the Bowels, like a ball at the Navel; Wind employed affords them little or no Ease, because the Guts contracted by the Nerves, are the principal Reason of the Pain, and there is no *Exit* thro' the *Anus* for that Matter; the hysteric Symptoms which accompany this Disease, betray its Seat to be remote from the Intestines. As an Acidity is plainly discoverable in hysteric Persons by their sour Belchings and Vomiting, and by their extraction of *Crocus Martis*, *Verdigrease* and *Ceruss*, from the different Metals the Matter chances to be vomited into, and when tasting sweetish, or bitterish and styp-tick; so *Dilution* and *Obtusion* or *Alteration* must be the Method observ'd in Diet; we therefore order them to drink *Bath* or *chalybeat* Waters, to eat a farinaceous Diet, to eat Meats of good Juice and easy of digestion, to avoid Sours, Pickles, Salts, and too viscous Diet; thus we cut off all occasions of fresh Fuel, tho' we advance slowly towards a Cure.

*Colicks* are sometimes of another Nature than the two former, for we perceive bili-

ous Persons often troubled with Pains in the Belly, we observe the Patients to have a burning Heat upon them, what they belch or vomit has a bitter Taste, they are restless and watchful, they are feverish, and thirsty, their Urine is sharp, their Sweats are hot, and they are often troubled with a Jaundice, or, at least, are yellow, and their Excrements are ting'd yellow; as the Cause of this is quite different to that of the preceding, for here the acrimonious Salt residing in the Juices, twitches the sensible Membranes of the Guts into spasmodick Pains, this same Salt gives a rapid Motion to our Fluids, and Heat depending upon Motion, it is more or less intense, according to the Nature of its Concentration; this Salt betrays it self in Belching and Vomitings, and gives us an Assurance of its Presence in the Stomach, as the Colour of the Excrements does in the Guts, and the Colour of the Skin does of its Lodgement in the Mass of Blood; now what we to do in this Case; we know Salts are always abated in their Keeness by diluting them; and therefore here pure Element itself has been known of great Use in habitual Colicks, the *German, Tunbridge* or *Islington*-Waters are useful, but *Bath*, any sulphureous Ones prejudicial; the \* *Posca* has been known to cure by Drink

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\* Vinegar and Water.

ing it, and by giving it in Glifters, *Rhenish* and Water is a commodious Liquor, and any of the smaller Wines from the *Rhine*, such as *Moselle*, will answer the purpose, because as a fixt, or rather an alcalifate, Salt is the Origin of the Disease, these either dilute or correct this Cause; and the Diet ought to be also thin and diluting, or soft, and subacid, such as all the Diet of Barley, Oats, and Wheat, Pears, Apples, sour Jellies, and Victuals season'd with Vinegar; and as these are known by Experience to have been of Use, is there a more convincing Proof that Diet should be contrary to the Cause of a Disease, than this is? Or that all Valerudinarians can't be govern'd by one Rule? Having already spoken of Inflammations, and the Diet proper in them; whenever a Colick proceeds from thence, as is common enough after the Measles, we must regulate the Diet in them, as has been mention'd under that Head.

THE *Iliack Passion* naturally follows a Discourse on the Colick, since it is a Branch of it; or indeed, a more vehement Degree of the same; and therefore I shan't give any other Rules in it, than I have done in the *Colick*.

IN A *Scirrhus of the Liver*, the Signs which betoken it, are a Weight on the right Side, a choaking upon lying down, a Swelling there, a difficulty of Breathing up-



on a full Inspiration, a Jaundice, a lixivial Water, and at last a Dropsy; a Weight is a certain Sign of a Quantity of Matter lodg'd, and the Bulk of the Liver, being vastly enlarg'd from a total Obstruction of the Circulation in those Parts, proves this Quantity, which arises from a deprav'd Use of spirituous Liquors hardening the Juices and the Fibres; so that the Liver has quite lost its Function; from this Bulk it happens that upon lying down, the Liver presses hard upon the Diaphragm, and straitens the Room for Air in the Breast; and the Tumor confirms us in this Opinion; as also the Difficulty of Inspiration and drawing in of our Breath; the Jaundice, which is generally black, depends on the Bile residing in the Blood-Vessels, and tinging the Skin of a dirty Hue; the Urine shews this Bile in the Blood, as also its Nature by its Colour, and the Dropsy is the last Stage of it; for when the Liver is grown so stiff and parch'd, and so large, that the Lymphatics running upon its Surface, are press'd upon too much, they are distended and broken, and this Breach being incapable of any Amendment, their Liquor continually oozes and drips down into the Belly, and swells it. In this Case, 'tis not easy to determine on the Nature of the Diet, for the Obstruction requires an aperient one, but then the Dropsy is more encreas'd thereby

and if we study how to fit it to the Dropsy, the Obstruction is rendered more obstinate: In short, if we wou'd hope for a strict *Regimen* in the Case mention'd, I may say there is none to be expected; however, I hold a strict observance of Diet, of Consequence; when it has come to this Period, the Obstruction receives no Benefit from the most aperient Medicines yet invented, whether Chalybeats or Mercurials, and must that be expected from Diet, which can't be hop'd for from concentrated Openers? No, the Patient is doom'd to decay; and therefore as the only Hopes remaining, are from the Stoppage of the Ouzing, we may act in Diet, as we wou'd in Bleedings, to wit, we shou'd insist upon subastringent and emplastick Materials, they will retard the immoderate Efflux of Lymph, and will help to spin out Life to a longer Day. *Spar-* Waters therefore drunk with Claret, all Liquors drank with Steel quench'd in them, Pome-granates squeez'd into Wine, Rhubarb in Beer or Nettle-Tea, a Diet of Quinces, of Rice, of Sago, of Jellies, and of Almonds; indeed, if Liquors were diuretick and cooling, they wou'd conduce to the same Ends; and therefore I hold small Punch also convenient, because it wou'd dry the Blood by draining it, and cool the remaining Part, and so thicken it. But observe, that I only speak concerning an irremediable

*Scirrhus* : For before the *Scirrhus* has reach'd this last Stage, it is certain we insist upon an attenuating Diet, accompanied with glibbing Particles, the first push forward the Humors, and the latter disengage their Adhesion to the Fibres ; take Care in attenuating, how we act, for by overdoing the Matter, we shall thicken the Humors more ; this puts me in Mind of *Piso's* Rule in Coughs: He says, if we give too hot Pectorals, we are so far from inciding, that we thicken the Phlegm ; Liquors well hopped and sugar'd are sufficient to answer the Design, by a gentle Attenuation and Lubrication ; sweet Wines in this Case are also conducive, and, if arm'd with gentle Bitters become thereby better.

IN a *Lientery* or *Cæliac Passion*, the Victuals we take down are thrown out again little or nothing chang'd ; the Peristaltick Motion is hasten'd, they are succeeded by a Cachexy, and at last an Atrophy. Many indeed, are the Causes of these Distempers among the rest, Ulcers of the Guts are a principal one, which I refer to their proper Head ; but a Laxity of the Fibres, a Defect of Bile, or an Obstruction of the Mouth of the Lacteals, are the chief and most common. When the Guts are too lax, all they contain glide down with Ease, the very Weight of the Victuals is the Spring of Acti-

in, it presses them forward, and then also the  
mentary Tincture acquires some Degree  
Putrefaction, which two join'd, produce  
Extrusion hastily. 'Tis hard to distin-  
sh between a Deficiency of Bile, and an  
struction of the Lacteals; only in the  
mer the Faces are not ting'd, but are in  
latter: However, the Cure differs not  
all; for whatever restores the Bile, will  
in the Lacteals, and *vice versa*: As to the  
ptoms then, I say the Victuals are thrown  
unchang'd, because there is no Time al-  
d for their Dissolution, their Stay is too  
rt for that Design; the Irritation at the  
orus, the Laxity of the Intestines, and  
Mouths of the Lacteals being shut, do  
hasten the Descent: The *Cachexy* fol-  
s, because the Blood grows too viscid,  
gross; the Spirits, therefore, are too  
and consequently the Circulation grows  
and languid, and therefore there is a  
ness all over us, and the Legs dimple,  
ough, upon Pressure, and, lastly, they  
away for Want of Nourishment. What-  
strings up our Fibres, whatever exalts  
Fermentation, and opens Obstructions,  
relieve; but Diet consisting of volatile  
califate Salts have these Effects in an  
ment Degree: Wherefore Aromaticks, hot  
pungents in Liquors or Meats, are conve-  
t; Peppers then, and all the hot Spices,  
nutmegs, Mace, Cinnamon, Cloves, and  
Ginger



Ginger do good in this Case; medicinal Wines with Horehound, Wormwood, Camomile, Betony, Marjoram, Mint, Catnip, and such like, are convenient for common Drink. But sometimes these have not their proper Effect, without a Shock given to the Bowels by Vomits, which I have now Design to comment upon at this present.

A *Bulimia*, or Dog-like Hunger, is an uncommon Disease; however, I have met with it twice in my Practice: They are both Females, and much distemper'd; if the Hunger continues for any Time, they grow either too costive or loose, and they grow dropical. Hunger argues some Pungency, and this, saline Particles in the Stomach, which twinge us into an Idea of Hunger. If this Acidity be a styptick Acid, the Guts become rigid, and then the Evacuations are arrested, and a Costiveness succeeds it; but if it be a tartareous one, it twitches the Intestines into Motion, and a Flux follows: And, lastly, an *Anasarca* swells them, by reason of the Grossness of the Juices stagnating every where, more especially where they are to ascend. In this case then, an Acidity is the Cause, which must be diluted, obtunded, and corrected by Meats and Drinks as follows; by Rhenish, Bath-Waters, Chalk-Water

e, bitter Wines, and Lime-Waters, by  
and Wheat, and by fat Meats.

in a *Pica*, there is an Appetite so de-  
ad, as to eat Lime or Chalk, there is a  
constant Spitting and an Anxiety: The Ap-  
petite is rais'd from an Acidity, and a de-  
ad *Idea* from the Spirits; the Spitting  
proceeds from an Irritation of the Glands,  
and also the Desire, which encreases the  
shaking of the Nerves of these Parts;  
the Anxiety depends on the Stagnation  
of the Blood: The Irregularity of the *Idea*  
is rais'd, when the Acidity is destroy'd, which  
is rais'd also by a Regimen like that in the  
*Anorexia*: They are then Gradations of the  
Cause.

*Cachexy* is attended with a Paleness, a  
distress upon Pressure, and a slow Digestion:  
Paleness is owing to the Blood, which  
is phlegmatick, the Pitting proceeds from  
the Stagnation of those phlegmatick Juices,  
the slow Concoction from a Want of  
Fermentation, and that from unactive  
Principles in the Blood. Here the Diet must  
be of very active Parts, which will at-  
tenuate and thin the Viscidities, give Red-  
ness to the Blood, and ferment our Juices;  
such as strong Wines, pepper'd and spic'd  
Sauces and Sawces, Meats ragoo'd or fard'd  
with

with Marjoram, Thyme, Savory, and such like; these add what Particles wanting, and help the Blood to circulate and so thin it.

IN *Crudities of the Stomach*, we consider how they offend: There is one called an *acid Crudity*; in it there are *Ructus*, a Tension, the Meat lies heavy on the Stomach a long while, the Urine is thick, there is a *Cachexy*, and a Dropsy, with any or little Thirst: The Belchings are of fermenting Particles; for where there is Fermentation, there can be no *Flatus*: Tension arises from this Fermentation: Victuals or Drink raise their Bulks when they ferment; the Heaviness and long stay on the Stomach, proceeds from the weak Struggle, and too slow peristaltick Motion: The Paleness of the Water, is from the want of fix'd or alcalifate Salts in it; the Dropsy is from the Loss of the Spring in the Nephres, and from Viscidities in the Mass: As soon as a *Cachexy* is confirm'd, a Dropsy ensues: For these are Degrees of the same Thing, and till a Dropsy is radicated, there is no Thirst, because the Salts are not corrosive. Bath-Waters are an excellent Remedy in this Case, because they both dilute and correct the Acidities effectually: The ferrous chalybeate-Waters also conduce to the same end; for they, being watry, do dilute

d, and being chalybeat pretty eminently, correct it. Canary, and Water with a little in it, has a good Effect, because it moistens and sheathes: If Drams are at any time allowable, they are in such Stomachs. The Advantage of Brandy moderately taken, appears by the Damage done to our Appetites with the Abuse of it, where it is found to take off the Edge of our Stomach, and when to abolish it: When, therefore, it is taken with Discretion, it blunts the Acid, and takes off a certain Share of it, where it is superabundant. I have already taken Notice of the Modus of its Operation; for it being a Compound of volatile Salts and a fixed Oil, it corrects and obtunds the Acid. Lime-Waters are of use in this Case, to allay the Points of this Salt. The Diet ought to consist of Sallads, Nasturtiums, Ruff-Rhadiſh, and Mustard, of young Beef-meat, Poultry, and their Eggs.

In the other *Crudity*, call'd the *Nidosity*, the Belchings smell like rotten Eggs, the Concoction is hurt, they are feverish, they are little nourish'd, and they are subject to *Anthony's Fire*, Scabs, and Leprosies. These proceed from Particles strongly fermented, and therefore their Belches are acrid, arising from such Humours; in such a Case, the Concoction is too swift: For when Particles ferment strongly, the Fibres are



are soon corrupted; Salts of a contrary Nature meeting and struggling, raise a Heat and a Feverishness in us; Nourishment is an Apposition of Parts, but when the Blood is too hot, it is too rapidly mov'd forward to different Parts, and is carry'd off by the Pores and Kidneys, and therefore too little carries in the Vessels for Nutrition: When the Blood is hot and corrosive, and somewhat gross, it sticks in the smaller Vessels, and erodes them into Scabs or other Eruptions. We readily perceive then what Condition our Stomach and Bowels are in, and, by consequence, what sort of Juices our Vessels contain: The Bile contains a good deal of Oil, of volatile and fix'd Salts, as also of a nitrous one; these Salts, exacted mix'd with the Oil, make it of some Consistence; the Oil is partly volatile, and partly fix'd; for the first coming off is inflammable, and the latter is extracted by Spirit of Wine only, as may be seen by its Analysis; so that it appears, that Bile is a *volatile oleosum*, blended with an *acid* Salt. If then the Juices are of this Nature, they will ferment strongly, our Business must be to aim to reduce this strong Salt to some Mildness, as may render it incapable of fermenting to, and hurting the Fibres, which we do by Meats and Drinks of a diluting and cooling Disposition; and therefore a cooling Element is necessary, the Spaw-Waters

## *Sickness and Health, &c. .III*

gentler Kind, such as the *German* or *bridge*, are also convenient for common  
nk, and our Meats ought to consist of  
ling Sallads of Lettice, Lambs Lettice,  
age, Cowslip Buds, Spinage, Cucum-  
s, pickled Samphire, and Barberries, and  
Milk-meats, light Puddings, Panado's,  
young Meats, and of fresh Fish.

*Diabetes* is easily known from the  
ntity of Water, which is continually  
ning from them, and which is so smooth  
to be tasteless, but not sweet as is vulgarly  
m'd: The Distinction between this and  
Hysterical Person is easy, because these  
e Water frequently indeed, but those  
inually, and it runs, as I observ'd in a  
tleman whom I cur'd, as constantly, as  
sprung out of a Cock for Water; they  
lean, are thirsty, they have an Anxi-  
and Heat about the Heart; and a Pain in  
Back, with a Cachexy usher in Death.  
constant a Flux as this, must necessarily  
and upon a strong Bent of the Humours  
this Channel: Dr. *Harris* does very  
erly term it a *Diarrhæa Renum*; and  
that of the Intestines, or a strong Vo-  
ng, the Humours run with Violence  
ards the Guts and Stomach, so the Fi-  
must be strongly and constantly con-  
ed to make it so continual. Some Per-  
Fibres retain the Shocks given them a  
long

long while; if therefore the *Renal Ple* thus constituted, be irritated by any the Humours, it will be constantly twitch the secretory Ducts into Vibrations, and to a more plentiful Secretion; but then Humours must be dispos'd to obey the lasting Impressions, which I readily conceive they are; for few are subject to this Disorder, save such who have drank too plentifully of small *French Wines*, and have much Fruit: So that we may conjecture the Blood has undergone a good Degree of Coagulation, or is eroded by these Acids, the thinner Parts readily escape through the Ducts; and the more, because the Looser Humours, whose Bent is determin'd to the Kidneys, distends and relaxes the Glands. The Urine of such Persons is smooth, because this Acid is intimately blended with the oleous and watry Parts of the *Chyle* and *Serum*: They grow lean, because the Waste is greater than the Repair, and the Health depends upon a Substraction of Moisture from all other Parts; and 'tis well enough known, that one Evacuation being encreased, another is deficient. They have a Pain in their Backs, because whenever Humours are hurried that Way, the Parts are distended and a Distention there (as in the Head) is the more sensibly felt, because all the Parts are membranous; and the Pain is a pungent one, which betrays a great

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mony in the Humours, as does the Heat in the Breast; and the Anxiety denotes a Coagulation: When the Humours are much emptied, the Remainder gradually thickens, and finds a Difficulty to run along; and therefore a Cachexy is the last Stage of a *Diabetes*. From this succinct Account of a *Diabetes*, we may judge what can be effected by Diet, for we must give what will correct this Acidity, and preserve the Mixture of the Blood, and we must strengthen the Ducts of the Kidneys. It is affirm'd by *Hartman*, that there is a secret Vertue in Steel against *Diabetes*, and therefore Spaw-Water is a convenient Liquor for such to drink, and it plainly appears, the *German* Spaw-Water is a volatile Salt in it, so that it is surely conducive upon more Accounts; for this Salt and the Steel are proper to resist the Acidity reigning in the Mass, and the Stypticity is convenient to close the Mouths of the gaping Ducts: Lime-Water is a proper Liquor for Drink, because it also resists the Acid in the Blood; but the most common Liquor now in use is *Bristol-Water*: This, indeed, acts by its alkaline and styptick parts, and so corrects the Acid in the Blood, as well as contracts the too open Ducts. As we have never yet seen any Account of these Waters, or heard of any Experiment made upon them, it may not be unacceptable to relate to the Readers, what I have done to

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find



find out their Principles by which they act. Upon pouring in Syrup of Violets, they turn'd of a very fine Green, from whence I concluded they contain'd some alkaline Particles, and to assure my self what Species of Alkali it was they were impregnated with, pour'd into a Glass of it, a Solution of sublimate Mercury in Water, but no white precipitate subsided, and therefore I concluded, that this Alkali was not a volatile Salt; nor was it a fixt Salt, for then a red Precipitate wou'd have fall'n down; nor was it a Calcareus Alkali, for then a yellow Powder wou'd have fall'n down to the Bottom; and therefore I concluded it was a *Chalk*, for Chalk infus'd in Water will turn Syrup of Violets Green; I put Galls in Powder to it, they chang'd the Colour, and after some Time, a yellowish white Sediment fell to the Bottom, from whence I concluded, they contain'd a *Cupreous Vitriol*: These were the Effects of Trials, from whence I think we may safely conclude, that they also contain an *Alum*, for as they contain a Vitriol, and as no Vitriol is made without an *Acid*, it appears that some Acid runs along the Subterraneous Passages which makes this Vitriol: Not as an Acid running over Copper makes cupreous Vitriol, so the same Acid running over a Bed of Chalk makes Alum; and Chalk lies at the Surface of the Earth, the

Fermentation between the Acid and this Chalk, may give that Warmth also; 'tis true, these Waters, as all common Waters do's, contain some Sea-Salt, as appear'd by pouring Oil of Vitriol, and a Solution of Saccharum Saturni, as also Spirit of Nitre, in which Silver was dissolv'd, into them; but the *Chalk*, the Roman, Cyprus or blue Vitriol, and the *Alum* are its chief Ingredients, whose Virtues are to correct Acidities, and to contract the Mouths of the Vessels, which therefore make these Waters eminent in the Case mention'd: And upon a very good Foundation do such Physicians and Surgeons proceed, who order these Waters in habitual Ulcers, Defluxions, Rheums, bloody Urine, and in short, in all evacuations whatever, since they so eminently abound in styptick Particles; however, let not that be done first, which ought to be last attempted, for proper Evacuations, Revulsions and Alterations ought to be first tried, before we offer to stop any Flux; if any Wine is allowable, it must be cold, because it is astringent; the Victuals ought to consist of Rice, soft Fish, Almonds, Lettice, Purslain, Wheat, Calves Sheeps Feet, and Milk-meats; and all Spices or diuretick Diet ought religiously to be avoided. *Hartman* from the great Opinion he has of Chalybeats, advises to boil all their

I 2

Victuals

tuals in Waters in which Steel has been quenched.

IN a *weak Liver*, we observe the following Symptoms, the Body is cold to the Touch, and swells every where, and the breath short upon any Motion; sometimes indeed there is a Hectick, and Blood flows from the Nose; they have a great Weakness upon them. The Ancients call'd a weak Liver, what we call a depress'd State of Blood, for the Temperament of our Juices is generally discover'd by the Touch; if we are cooler than ordinary, the Blood is bound with unactive Principles, there is too small a Struggle rais'd, from which alone depends Heat; and in this Supposition the Blood is too viscous and gross, and therefore apt to stick in every small Vessel, more especially where an Ascent is required; however, even in the upper Parts themselves the Blood moves too slowly, and is accumulated; and therefore, as of it self, it stands still, or moves too sluggishly, as soon as we move and press it forward by Action, then it is hurried on faster than the Vessels can circulate it, and so the Parts swell, and are distended too much; and as this is the Case of the Lungs, when we exercise, upon Motion, such cachectical People breathe short and thick: If indeed there be a Mixture of saline Particles, a Hectick is accompanied

companies this State at Night, when our  
 pores are obstructed; and this small Strug-  
 gle join'd to a Grossness in the Blood, is the  
 occasion of bleeding sometimes at the Nose,  
 which shews its Condition if receiv'd up-  
 on a Cloth, for a pale Circle surrounds the  
 red; and this Symptom happens from the  
 viscidities, which introduces a small Degree  
 of Stagnation, and the Vessels being distend-  
 ed with the Load, crack and pour out  
 blood. Here it is easy to see, that our In-  
 structions in Diet must be levell'd against  
 viscidities and Sourness; these are Valetudi-  
 narians, who can't admit of the slippery  
 Diet Dr. *Cheyne* recommends; this in short  
 softens the Case with sedentary Men, they  
 don't use Exercise, the Juices, for Want of  
 Motion are apt to jelly in the Vessels, and  
 we meet with Obstructions at every small  
*transient Artery*; the Posture they sit in,  
 hinders the reflux of the Blood into the  
 Veins, and their Feet often swell so much  
 at Night, that their Shoes and Stockings be-  
 come too tight, and take the exact Im-  
 pression of the Thread Stockings they  
 wear; to recommend Element and the ve-  
 getable Diet here, to cry up Rice, and  
 go to such Men, is to charge them with  
 the very unactive Principles their Blood is  
 already cramm'd with! — but enough of this  
 I prove: No, we are to take quite a diffe-  
 rent Road with these Persons; we must al-



low them generous Wine to a moderate Quantity, we must give them a heating and attenuating Diet, flesh Meat high seasoned with Spices and Salt, Salladings and Fricings of sweet Herbs; they must shun Milk, Eggs, Rice, Almonds, Jellies, and all the farinaceous Train, as they would be Poison; if they drink Malt Liquors ripened by Age and well boil'd, it ought first to be medicated with Bitter, hot and aromatick Plants of any Kind, such are Rosemary, Ground-Jvy, Ground-Pine, Agri-mony, the Seeds of Cardamoms, Cubeb or Coriander, the Roots of Zedoary, Ginger, Calamus-Aromaticus, the Flowers of Chamomile, Orange and Lemon Peel and many more of these Tribes; for to attenuate and exagitate the gross Humours, they blend with our Victuals and Juices, and rectify all the Faults of the Mass and consequently abate the Symptoms gradually. If any where, here Cordials of the warmest Sort will be of use. For to Digestion, to Circulation and Secretions a certain Specifick Degree of tenuity is requisite, and this cannot be expected where there is not a sufficient Quantity of fermenting Particles; and the whole Tribe of Physicians, who pretend to a moderate Degree of Skill in their Profession must own, this great good is not plac'd in Element, or the poor and meagre

re Diet, it is eminently perceiv'd in the pungent and aromack Food; 'tis true, if such insist upon this poor spiritless Nourishment, the Stomach may not chance to be disturb'd with Struggles, but then consider the Load and Oppression they cause, consider how poor and unactive they make the Blood, how few Spirits such Men enjoy, how little unable they become by it, how sluggishly the Blood moves, and how bloated their Muscles are, and then sum up to the World the balance between the Conveniencies and Inconveniencies.

IN an *Apoplexy*, the following observations appear, a total Loss of Motion and Sense, a snorting, but Respiration and Pulse remain; and in a desperate Case, they froth at the Mouth: Motion depends upon a free and joint Influx of animal Spirits and Blood into the Muscles, and so do's Sensation, for they differ only in Degrees; and as the ingenious Dr. *Willis* has it, Motion differs from Sensation, as a Storm from a gentle breeze; if therefore either the Blood or Spirits are hinder'd in their Influences, both are lost: Here the heaping too much Blood up in the Vessels, compresses the Brain and Nerves, so that there is no Motion or Sense to be expected from that Tract of Brain so disorder'd, and as the *Cerebellum* in an *Apo-*  

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plexy

plexity is free from this Load, so the Nerves of the Heart and Lungs continue their Functions for a while; however, the Disorder of the Pulse, and their Snorting do shew, these Nerves are not quite exempt, the Pulse is quick and strong, or small and slow, that is, unequal, by Reason of the interrupted Course of it; the Snorting is occasion'd by the Motion of the Wings of the Nose upon drawing in the Air, the Nerves of the Face having lost their Use, the Wings of the Nose, as in all weak People, lose their Elasticity; therefore they flag, and are mov'd by the very Pressure and Suction of the Air; the Frothing at the Mouth depends upon the Straitness of the Jugulars, the Nerves surrounding them grow flaccid, and the Veins fall in, so that the Blood does not return freely, as appears also by their Swelling; and as *Lower*, by Experiment found, that Dogs froth'd in their Jugulars were ty'd, so happens it upon any Obstruction in their Passage, as in the Case before us. *A Palsy* is a partial Apoplexy, as an Apoplexy is an universal Palsy, so that the Difference is only gradual not special; it is accompanied with a Loss of Motion, or Sense, or both; the Brain is free, because it is an Obstruction of some of the Nerves below that Organ; the Nerves grow flaccid and at the Command of the Will nothing is executed, a Redundance of  
visci

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acid Juices relaxes the Nerves, as well as obstructs them; the many Causes antecedent to the immediate, cannot be here accounted for, since the Obstruction is by no means *univocal*, nor yet can the Intentions of a *Regimen* be stated without Regard to them.

A *Lethargy* is also a smaller Apoplexy, to which some Fever is join'd; the Sleeps, the Impotence to Motion, the Paleness of the Face, the supine Posture, the Inactivity of holding any Thing in their Hands, and the Forgetfulness, are Branches of the Inactivity of the Spirits; but the Yawnings, the Hiccups, the Tremblings, are Proofs of Fever and Inflammation; so that it seems to be an Inflammation of the Brain, of that which the Surgeons Term an Inflammation or *Congestion*, where sluggish and unactive Matter is loaded with Salts envelop'd in a slimy Mucous, the Grossness of the Juices hinders free Circulation; and therefore some Stoppage to the Blood in the smaller Vessels; this is so gradual, that it is some Time before the Symptoms are heap'd up to put a full Stop to the Blood's Motion, and this is the Reason why, before a Lethargy is confirm'd, Persons find a Heaviness in their Heads; when this Obstruction is rivetted, then a Lethargy commences; and as soon as the Salts



Salts are extricated, then the Fever and Inflammation appear ; were it not for this Fever and Inflammation, we shou'd meet with no Signs of irregular Excursions of the Spirits ; and, *vice versa*, were it not for this Sluggishness of the Humors, shou'd have no Complaints of Oblivion, Drowsiness or Impotence ; so that as soon as Fever and Inflammation, or the Grossness and Inactivity of the Blood prevail, we meet with Excursions or Rests in the Spirits. It is then a *compounded Case* agreeable in Part with an *Apoplexy*, and in Part with a *Phrenzy*, where Motion and Rest succeed each other alternately. A *Carus* is more remis than *Apoplexy*, as a *Coma* is a weaker *Carus* ; and therefore it is not needful to mention their Symptoms : A *Peripneumonia* is near a-Kin to a *Lethargy*, for there are Signs of an Inflammatory Disposition in the Brain, and a sluggish Humor in the Vessels ; from all which it is evident, that the Diet in Apoplexies, Coma's, *Carus* and Palsies must be the same ; all the Juices are jellied, and want to be heated and attenuated ; we must Season every Meat and Drink with Spices, with hot and pungent Materials, they must be sparing in the Diet, because the Digestion is weak ; the Wine and Malt Liquors must be generous but little in Quantity, and loaded with warm-Ingredients, as Marjoram, Sage,

under, and such like; Coffee and Tea are of great Use; roasted Meats are prefer'd to the boil'd, which are apt to dry, whereas the others are thickned already; Milk-meats, Pickles, Sours, or Salt-meats are prejudicial, because they thicken the Juices; and for this reason Brandy is a hazardous Liquor, as are all stronger Wines in any Quantity: This is all, we are to expect from Diet in these Cases; but in *Lethargies* and *watching*, *Coma's*, we are to vary somewhat from this Management; for as the Disease is a different one, so must we be careful in a particular Manner how they are nourish'd; the Diet must be diluting, cooling, and antiseptic, for the Inflammation and Fever, and it must be attenuating for the Viscidity and Laxity; we must seldom amount above a Spoonful for medicating our Waters, Ale, or Wines. Indeed in the watchful *Coma*, we may make use of Ales, or Wines, moderately strong; but in the Lethargy, they are best forborn, and Teas, moderately impregnated with the Ingredients, are most commendable. We must avoid all Things viscid and watry alone, Lemons, Pulse, Brandy, Milk-meats, salt Things, and actually cold, are dangerous; the Flesh they eat, ought to be scarc'd with gentle Aromaticks.

As we have in the last Paragraph taken a Review of the Regimen proper in sleepy Distempers,

Disorders, we shall here treat of their opposite, *viz. Watchfulness*. It needs no Signs, 'tis occasion'd by other Diseases, and is generally a Symptom of all troublesome Disorders. As in the sleepy Disorders, the Spirits were ill separated, and the Brain loosed with a viscid, tough Phlegm, in the watchful ones the contrary happens, for the Spirits are too briskly mov'd, or too plentifully separated, or both; it may happen, and often does, in Diseases where the Spirits are much exhausted, however, the few that are, must then be hurried briskly through the Brain, though they are much wanted elsewhere. It would be spending Time in vain, to bring Examples; but let any one look into the Chambers of Persons labouring under Ravings in malignant Fevers, and the Assertion I have made will be readily knowledg'd; where we find them restless for ever, and yet so feeble, as not to be capable of moving themselves from one end of the Bed to the other, without the Assistance of Nurses, upon whose Arms they feel as a Carcass, and a dead Weight. In this Case we are to consider, that the Blood and all its Juices separated from it, are become acrimonious and very pungent, therefore we must insist on such Drugs principally, as will temper and sheathe the Acrimony, which Work is compleated by Emulsions of Almonds, of the cold Se-

of Poppy Seeds : We are frequently oblig'd to stop here, because the Weakness of Patients is so great, that we dare go no further ; we dare not, in short, administer opiates, for Fear of thickning the Juices much, and, by so doing, putting a full stop to the Circulation. We are to avoid spirituous Liquors, because a small Quantity of them encreases the Acrimony, and the Doses would thicken the Blood, and keep them sleep for ever : Cowslip Tea is a commendable Liquor, and, if nothing for, Lettice of all Sorts is useful ; it is warm and smooth, and therefore dilutes and softens, which is all that is requir'd.

We will in the next Place examine into the Nature of *Convulsions* in their whole Extent ; some Authors distinguish between *Convulsions* and *convulsive Motions* ; they say Parts, to which Muscles are annex'd, and are shortned by an involuntary Motion, are convuls'd or contracted. And when these Parts have no Muscles but muscular Coats only, they say, they are troubled with *convulsive Motions* ; but as the whole Question is about Convulsions, I shall wave it, and proceed to give Notice of the different Sorts of *Convulsions* and *convulsive Motions*, and their Causes. An *Epilepsy* is known by an universal Convulsion, by an Abolition of both



both external and internal Senses, by  
ing upon the Ground, and frothing at  
Mouth, the Parts are all drawn up,  
cause the Muscles follow the Fate of  
Nerves: If the Nerves are shortned,  
Muscles to which they are annex'd are  
so contracted; they lose all Sense, beca  
the Origin of the Nerves is affected, a  
tumultuous Motion is rais'd there,  
which the Spirits run irregularly into  
whole System of the Nerves and drain  
Brain of them, so that none remain, f  
while, to fetch in Intelligence, or carry  
Messages: They therefore lose that *equi  
brium* necessary for the Action of stand  
and their frothing shews how greatly  
Reflux of Blood is interrupted by the  
gulars from the Contraction of the Ner  
that surround them and straiten the  
*Saint Virus's Dance* is variously descri  
as well as referr'd; some tell us it  
Convulsion by which they halt, and t  
Hands tremble, so that they carry  
Cup to their Heads in a ludicrous M  
ner; others say, they jump up, run  
and down, dance, tumble, falter, and  
a little, and upon this Head it is  
some of the most eminent Physicians  
fer'd to *Madness*; *Halting* is a Symp  
retaining to Contraction, where the M  
cles of one Leg are shorter than ordin  
the Leg is drawn up, and they who

affected must halt; *Trembling* is an  
 Inmate Influx of Spirits into the Anta-  
 gonic Muscles, which therefore makes the  
 Body unsteady and incapable to hold any  
 Position fast: To this irregular Motion re-  
 sults jumping up, reeling and faltering, and  
 is certain that a *Delirium* is often the  
 consequence of an Exhaustion of Spirits,  
 which they are disabled from holding  
 firmly to the *Ideas* represented, and who  
 he that takes a narrow View of Con-  
 ditions, will deny that their Spirits are  
 exhausted upon a severe Fit.

THE *Spasmus Cynicus* or *Dog-Cramp*, is  
 a contraction of the Muscles of the Face,  
 particularly when the Mouth is drawn to  
 one Side; if the Muscles of the Temples  
 and Jaws are contracted at one and the  
 same time, it is call'd *Trismus*; and if  
 both Sides are contracted, it is call'd *Ri-  
 gidus Sardonius*; from *Sardoa* a Plant, which  
 the Ancients dreamt, caus'd Laughter  
 and merriment: These being Contractions, they  
 need no further Explanation; a *Cramp*,  
 or *Tetanus*, is a Permanent and lasting  
 contraction of any Part; the Contraction  
 arises from a violent Influx of Spirits into the  
 Muscles contracted; the Continuance springs  
 from the Condition of the Fibres so con-  
 tracted, where they become rigid and stiff;  
 that in this Disorder, Physicians can ne-  
 cessarily act with Precision, without having  
 I  
 Regard

Regard to the Spirits and the Fibres  
 one and the same Time. *A convulsive*  
*Cough* is commonly term'd a *Hoop*  
*Cough*, in which Children cough so  
 lently, that they hoop or draw in the  
 Breath with a hideous Noise, and in which  
 they often fall back as if they were  
 choak'd; from the violent Irritation,  
 Lungs are strongly contracted or convulsed  
 so that they hardly can be open'd again  
 to receive the Air: I can't pass by this  
 Disorder, without observing, that the Physicians  
 seem to have rejected these Patients  
 into the Hands of old Women; where  
 Secrets do they not pretend to for the  
 Cure of this Disease, than which nothing  
 can be more severe; and I much fear  
 small Success, that has hitherto been  
 serv'd to attend us in the Cure, has  
 even Rise to this impertinent Incroachment.  
 But if we would consider, that in Persons  
 afflicted with this Cough, the Pulse is  
 quick as in Fevers, that there is a violent  
 Irritation, that the Spirits are hurried  
 with Vehemence into the pulmonary  
 Nerves, that the Cough is periodical,  
 that there is an irregular Bent, as well as  
 a cacochymical Plenitude in their Juices,  
 methinks, these Intentions might reasonably  
 and effectually be answer'd; I say this  
 on Experience, because having had many  
 under my Care, I have soon succeeded  
 after Bleeding, an Emetick and two

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ree Catharticks, by administering a Spoon-  
ful, a Spoonful and half, or two Spoon-  
fuls, according to their Age, of the follow-  
ing Mixture, thrice a Day.

R Cort peruv. ℥j. Aq. Lact. alex.  
℥xij. epidem. ℥iij. infund. per noc-  
tem, colatur. add. sal. vol. oleos, ℥j.  
Tinct. Castor. ℥ss. Laud. liq. ℥ss.  
Syr. de mecon. ℥j. m. f. Mistura. de  
qua sumat cochl. j. (ij, iij. pro æ-  
tatis modulo) ter de die.

To this Class Shiverings may be just-  
ly reduc'd, in which the antagonist Mus-  
cles are interchangeably mov'd; the Spi-  
rits now run first into a certain Tract  
of them, and then immediately into an op-  
posite Road; somewhat lies on the Mus-  
cles pricking and galling them, and thus in-  
ducing an irregular Influx of Spirits; but  
as the Spirits themselves are put into  
confusion by some odd Mixtures, they  
cannot rid themselves of; it may be easily  
s'd how deprav'd the Blood is upon  
the Attack of a Fever, its Proportions in  
the Mixture are quite chang'd, nay its very  
Principles become more concentred; this  
Symptom gives us the first Notice of a  
Fever, and it is so violent in some, as ne-  
cessary to be surmounted. A dry Asthma is  
not a convulsive one, there is seldom a  
K Cough



Cough or Spitting, unless when the Fit is over, it happens on a sudden, and appears unexpectedly; the Expiration appears as if it were pump'd out, and the Inspiration is very difficult; it is increased or rais'd upon any sudden Passion, they complain as if they were girt around with a Girdle, and have a Pain in the bare Ribs. Coughs proceed from somewhat pricking the exterior Membrane of the *Trachea*, and Spitting from somewhat extravas'd in that Passage; but in the Beginning of an *hysterick Asthma*, this is not the Case, and therefore they seldom or never cough or spit in the Beginning; the Fit begins from an irregular Influx of animal Spirits into the Nerves, not into the Arteries, so that they are contracted first, and the Vesicles being surrounded by them, there is no room for Inspiration; but at last the Veins being obstructed by the Contractions of the Nerves, the Arteries spue out Serum into the *Bronchiae*, and therefore when the Fit is over, there is a gentle Cough and Spitting. All Convulsions are sudden and unforeseen; no former Alarm given, by any sharp Particles in the Brain or Parts, but the Spirits make Excursions, and their Motion being in a Manner instantaneous, a Convulsion is form'd and executed at once, and they are as suddenly unbent as they

tracted, and therefore the Fit disappears all  
suddenly; when there is a great Diffi-  
culty in lifting up the Lungs in Inspira-  
tion, as there must needs be when the Air  
and Contraction of the Nerves serving for  
lifting the Breast, are put in the Scales,  
his Elevation is all forc'd Work, and  
back again the falling of the Breast is  
like the Descent of heavy Bodies, every  
Instant accelerated, as in the Elevation  
they were every Instant retarded. All Pas-  
sions are executed by the Spirits; if then  
spherical Persons be mov'd, whether by  
any real or imaginary Cause, their Spi-  
rits are wound up and set in Motion; and  
their Scene of Action is in the Pul-  
monic Nerves, the Lungs are affected  
with this *Asthma*: The Sense of *Girting*  
comes from a real Bracing the Parts by a  
convulsion of the inspiratory Muscles, and  
Contraction of their Nerves; and from  
the Membranes being in like Manner af-  
fected, the Ribs are pain'd; that is, their  
surrounding Membranes are distended with  
Blood, for want of its due Circulation.

*Hiccups* need no Description, but we  
do not all agree on the immediate Cause or  
the Manner of its Production; if we  
take a View of what happens in it,  
we will go a great way to state the Case  
it. In a *Hiccup*, there is an accelerated

Inspiration, and immediately the *Epiglottis* is shut, and this frames the Symptom therefore while the Muscles serving Inspiration are put into Action, the *Epiglottis* is on a sudden drawn down, and closes up the Passage of the *Glottis* whether it be that the inspiratory Muscles are on a sudden inflated by the copious Influx of animal Spirits into the Nerves, as is the Case in hot and bilious Constitutions, or that the Failure of Spirits in the Nerves running to the expiratory Muscles, as it happens in weak and dispirited People, occasions their Antagonist Motion, is little to the Purpose; for adding Force to the inspiratory, or subtracting Spirits from the expiratory Muscles, has the same Effects in convulsive Cases; since Antagonists equiponderate, both are at rest, but if one loses, the other gains Weight, and exerts it self; which of the two, I say, is the Case, still there will be a sudden Elevation of the Breast, and a strong Inspiration, and then the *Epiglottis* is contracted also; probably from some troublesome Matter lying on the Stomach, as is the Case generally of speaking, and galling, and putting into Contractions the *Par vagum*, and, by Contracting that Branch of it also which is inserted into the *Epiglottis*. A *Palpitation* is also known, and happens from a Concussion of the Heart, arising from its strong Contraction.

tion, by which it pushes against the Sides of the Ribs. In *Hysterick Women*, *Strangling* arises from the Contraction of the Lungs and *Epiglottis*, from the Spirits running into these Parts, and inflating the Nerves, and shutting the Trap-door, at which the Air should enter, and the Fear of it is justly grounded in these hysterical People, from what happens: In them, at the Navel, a Ball seems to rise, because the *mesenterick Plexus* of Nerves is strongly contracted and inflated, which draws the Bowels up in this Form: Here also Respiration is often abolish'd, because the Blood in permanent Contractions stagnates, and such Persons lye as breathless for Hours together; from a lasting Contraction of the Lungs, their Blood either does stand still, or is in Danger of being quite congeal'd; they lie void of all Sense, because there is a total Excursion of the Spirits from the Brain; they often feel a *Creeping* all over them, as if some little Creatures were moving upon their Skins, from the gentle Contractions of the Nerves of the Skin; and, in fine, wherever Muscles or Membranes are involuntarily mov'd or contracted, they betray Convulsions: So that our Business is now to enquire into the State of Humours in Convulsions; and as they differ infinitely, no *Regimen* can be agreed upon, till that State can be ascertain'd. For my Part, I would



willingly have it awarded, that nothing should be call'd a *Convulsion*, which does not depend upon a strong Influx of animal Spirits into the Nerves and Muscles; for where the Contraction is the Consequence of a Privation of Sufficiency, it properly retains to a Palsy, temporary or permanent, and at last we are forc'd to act very differently in these Cases, when we come to prescribe. An Example will illustrate the Point in hand: A Person is seiz'd with the Small-pox, the Blood, and, consequently, the Spirits, are hurried into the minutest Recesses of the Body with Precipitation; the Party under this Excess of Motion is surpriz'd with an Epilepsy, which, under the Circumstances as they are here stated, is deem'd salutary; the Eruptions are generally distinct or, at most, coherent, the Pulse is of that Kind call'd *chordosus*, where it feels like the String of a musical Instrument harp-strung, and their Fever is high and burning. This Epilepsy is properly a Convulsion, because the Blood is thin and volatile, and as well as the Spirits, move forward apace the Nerves are so fill'd, and their Contents frisk so quickly on, that the Muscles easily become tense and contracted: But, on the other hand, we see some Persons ever anon shivering severely, their Blood feels chill'd, nor does it betray any Signs of Fever, which too often deceives unwary

Peop

People into a dangerous Security ; their Pulse is so low, as can hardly be felt, so that they frequently are cheated in affirming there is no Fever, not regarding, or not knowing that the Quickness of the Pulse is the *Criterion* of a Fever. I would unwillingly call universal Contractions here, an Epilepsy ; because, as the Blood is under a State of Coagulation, the Spirits must be very sparingly separated from it, and there are certain Grounds to suspect, that these Contractions are only Failures in some Nerves, and Excesses in others ; so that the Muscles, the most supply'd with nervous Juice, having no Weight in the opposite Muscles to balance them, rise into Action, and are contracted. From this View, confirm'd by daily Experience, it will plainly appear, how different the Diet must be in convulsive Cases ; the former, in short, is the Effect of a Plenitude, while the latter proceeds from Inanition, or some Deficiency ; that while we labour to subtract in the former, we study to add in the latter. The same must be said in such Valetudinarians as are upon any the least Occasion subject to convulsive Disorders, as must be said in persons actually under their Torture ; for the Disposition and the Fit differ individually, and in Degrees only : Wherefore, in persons liable to Convulsions upon Errors of Diet, or the six Non-naturals, or actually

labouring under 'em, must observe their Physicians Directions strictly. If the Cause of them is found to be excessive Feeding, or Nourishment too acrimonious, or both jointly, we must cut off a good deal of their Allowance, and allot them small Quantities of such Diet, as will obtund this Acrimony: we must forbid them the Use of strong Liquors, they must refrain from all Spices salted Meats, or Pickles, and they must eat and drink sparingly: Let their Drink be Barley-Water, or Ptisan, chalybeat-Water, and even pure Element it self: But when we advise Water-drinking, it must be observed I speak of such as is exempt from the Impregnations of inconvenient Minerals and Metals. Too much Industry can't be us'd for the avoiding these, since every County has its peculiar Soils, pregnant with Salts and Metals, which would be very destructive to the Patients: For my Part, I should be surpris'd to find a Town, whose Waters are very unwholsome, free from Distempers, and, in fact, the Town of *Newcastle* upon *Tyne*, whose Bowels of the Earth are laden with Coal-Mines, and whose Cisterns afford a *vitriolick Water*, as appears by the Redness of the Stones, the boiling the Meat red, and their changing with Gall: they could not have continu'd healthful, if they had not been oblig'd to fetch their Water in Pipes from some Reservoirs not tainted

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With this Vitriol. And I make no doubt,  
that every County has its faulty Waters  
to, which is the Physicians Business to  
search into, as also to fit them to their Pa-  
tients Case. But if, on the other hand, the  
causes of these Convulsions are found  
to proceed from a Deficiency, as it happens  
such as are seiz'd after *Diarrhæa's*, or  
evacuations, or immoderate Fasting, then  
we must study to administer all nourishing  
Meats and Drinks, without regard to any  
other Circumstance; and here it is that Jel-  
lies, Soops, Milk-meats, Chocolate, Rice,  
Marmeries, or Broths high boil'd, that a  
Set of Chickens, Veal, Rabbits, Mutton,  
indeed any juicy Meat, is convenient to  
supple the Vessels, but yet having Regard  
to the Distemper conjoin'd, if there be any  
Acid. It also often happens, that Convul-  
sions are attended with a Sourness, or Bit-  
terness at the Stomach, and then the two  
causes above-nam'd are not in the Question;  
as the first must feed upon Meats farc'd  
with the poignant and aromatick Herbs,  
for their Liquor should drink Bath-Wa-  
ters, or strong chalybeat-Waters; so those  
with bitter Stomachs, must avoid this Re-  
gimen, and live upon the cooling Plants, as  
Gall-tice, Spinage, and such like, upon Milk-  
if the Meats, and must drink light Chalybeats, and  
Water in pure Element. Persons subject to Con-  
vulsions from these different States just men-  
tion'd,



tion'd, are Valetudinarians with a Wit-  
 but it would be a strange Paradox  
 prescribe an uniform Diet to them  
 this is impracticable: It would be equ-  
 ly just to prescribe one Remedy for every  
 Disease, as one Diet for every unheal-  
 Person, and a Physician would be  
 blame-worthy for not enquiring into the  
 State and Condition of a Valetudinarian  
 as he would if he neglected that Enqui-  
 ry when sick. A Treatise aiming at this  
*maria* might be term'd, *An Essay on the*  
*Life and Sickness*, for who are they  
 labouring under a *Scurvy*, for Example  
 that must always insist on one and the  
 same Regimen? No, a Disease, whose  
 Name is one, proceeding from different  
 Causes, cannot require the same Diet, and  
 by Consequence, the Disposition to the  
 Disease, by which such are term'd *Scur-  
 butick*, is not univocal; so that if the Dis-  
 ease can't be treated always alike, ne-  
 ther can the Disposition or Habit lead  
 to that Disease; and, as I have nam'd  
*Scurvy*, I shall descend next to it, and con-  
 firm what I have said further.

THE *Scurvy*, as it is treated on by Au-  
 thors, and particularly Dr. *Willis*, is so  
 niversal, that there is no Symptom which  
 can be nam'd that may not be reckon'd  
 a Branch of it; as will easily appear

summing up the Signs of a *Scurvy*.  
the *Bowels* it produces the following  
Symptoms, want of Appetite, Vomitings,  
Diabetes, Fluxes, or Costiveness, Inflat-  
Colicks of various Kinds, and very  
ent; in the *Breast* it causes Palpita-  
s, Faintness, Spittings of Blood, Con-  
ptions, Asthma's, and Coughs; in the  
d it introduces Vertigo's, Apoplexies,  
ies, Convulsions, Salivations, Watch-  
Melancholies, Pains, and Stupors;  
the *Body*, Rheumatisms, Atrophies, Spots  
or black, Gouts, and the Urine is  
or red with Salts sticking to the Pot,  
often a Crust at the Top. These and  
y more Symptoms do Scurvies pro-  
e. For if the Ferment of the Stomach  
more or less eager, or more or less  
d than usual, the *Stimulus* is alter'd,  
Hunger is abated in Proportion; and  
the *Acid* there be very fretting, it gives  
n, or however invites an Influx of a-  
al Spirits into the Muscles of the Ab-  
men and the Stomach, and then a Vo-  
ing is produc'd; the same Sort of  
mour, whose Seat is in the Guts, vel-  
es them and the same Muscles into  
convulsions, and Humours flow plentifully  
of the Glands of the Intestines, and then  
kes ensue. If this sharp Humour pre-  
s in the Blood, and becomes very dis-  
ceable to the Kidneys, by stimulating  
their

their Ducts too much, then the Blood is corroded and thinn'd runs that Way with Violence, and its thin Parts are too plentifully secreted, and *Diabetes* ensue; but if the Guts are render'd stiff and rigid, if the *Fæces* are thicken'd, both which defects are the Consequence of an Acid earthy, then the Scorbuticks are costive. Inflammations are the Effects of Humours fermenting; if a Viscidity prevails, and this is commonly the Consequence of an Acid, the Bubbles we observe in Fermentation rise; but being tough, don't break, and occasion this Bloating and Fullness in the Belly, and Colicks also, which are more or less violent, as the Bubbles are more or less tough, or are more or less distended. If we trace the Scurvy into the Breasts, we meet there with Palpitations, because the Heart is strongly contracted, with Convulsions, proceeding from sharp Humours in the Blood and Nerves; with *Faintnesses*, from Stagnations in the Heart produc'd by this Acid in the Blood; with *Spittings of Blood*, from an Erosion of the Vessels by this strong Acid; with *Consumptions*, from an Abscess generated in the Lungs, by Reason of Stagnations occasion'd from the Coagulations of the Juices, and the Parts inflaming themselves and coming to Suppuration more or less sudden.

ddenly, as the Humour is more or less  
arp. *Asthma's* are various, that which at-  
nds Scurvies, is a Difficulty of Breathing,  
without much, if any Cough at all; it may  
ther be call'd a Straitness of the Breast,  
hich grows upon Action, and depends on  
e slow Motion of the Blood, and a Con-  
action of the Muscles of Inspiration, so  
at it seems to be a mixt Case, compound-  
of a Stagnation of the Humours there,  
d a tonick Convulsion of the Muscles of  
piration; however, sometimes *Coughs*  
e produc'd when this acido-viscid Hu-  
our ouzes plentifully into the *Trachea*  
*Bronchia*; 'tis indeed an Humour too  
uch fitted for a Cough and a lasting  
e too; for if the Viscid be once thrown  
t of the Mouths of the Glands, it re-  
es them, and fits them to receive such  
umours for ever after. If we trace this  
sease into the Brain, we meet with *Ver-*  
*o's*, which may have their original Cause  
the Stomach, for nothing is more com-  
on than *Vertigo's* to cease upon giving  
Vomit, which throws up a vast Quan-  
y of four Mucus, that lodg'd there; the  
ur twitches the Membranes of the Sto-  
ch, and the *Par vagum* is put into Con-  
ctions, and as this Contraction affects  
e carotid Arteries, (the *Par vagum*  
communi-



communicating a Branch to them) and some Degree accelerates the Course of Blood in them, as it happens in straitened Channels, where Liquors run the faster, that more is heap'd up in the Brain than is reconvey'd; upon this Account the Blood-Vessels running along the bottom of the Eye are distended, and move the Retina out of its Place at each Pulsation, on occasion a *Vertigo*. *Apoplexies* and *Palsies* are Effects of stagnating Juices, the Blood and Spirits in some *Scurvies* are viscid, that they are unfit for Motion, and then a partial Stagnation produces a *Palsy* and a total one, an *Apoplexy*. *Convulsions* are a contrary State to *Apoplexies*; in the one the Spirits stand still, in *those* they are hurried too much; but whether the Contractions are always an Effect of too swift a Motion of Spirits can't be affirmed, because any disagreeable Pungency, lodged at the Root of a Nerve, may cause a Contraction, and probably in some *Scurvies* this is the Case. *Scorblick* Persons generally spit much, their Spittle has a disagreeable Taste, and causes them often to spit it out, which frequently brings on an Atrophy. The Occasion of this Spitting is the same as of a *Diabetes*, the Humours circulating thro' these Glands incite them to a more plentiful Secretion, nothing more disagreeably twitches the

Vessels

vessels than a harsh Humour; this is dis-  
 tinguishable in Allom, and in Mercurials, at  
 which a Spitting is always rais'd for  
 while, or a long Time: The Patients, at  
 this Time, complain of this odd and harsh  
 taste in their Spittle, so as to be nau-  
 seous to them, and they are even afraid  
 to swallow it, lest they should vomit,  
 being of so disagreeable a Taste to  
 them. *Watchfulness* is a Sign of some  
 tumult in the Brain, but whether this  
 arises from a Hurry in the Spirits, or a  
 trembling of the Nerves, is a Dispute,  
 which is best determin'd from the Confi-  
 guration of the State of Blood at the  
 same time being, which may be overheated or  
 parch'd. The morbid Condition some-  
 times is under, and their continu-  
 ed Fears and Jealousies, attended with a  
 coldness of the Parts, denote, as fairly as  
 can be expected, Coagulation or Viscidity  
 of the Blood: The Blood is made thus viscid,  
 the Acid abounding, the Parts are made  
 cold from this Acidity, and the Brain ad-  
 vances to a state of few Spirits; but what are sepa-  
 rated, move in certain Tracts only: *Ideas*  
 follow the Proportion of Impressions, and  
 they are Consequences of the Motion of  
 the Spirits, and Tremblings of the Nerves:  
 therefore the Spirits are few in Quan-  
 tity, but the Nerves are become rigid,  
 the Impressions, which are few as the Spi-  
 rits

rits are, are long retain'd: All that can be of Melancholy, is, that it is a Passion Mind attended with little Action, 'tis sluggish, stupid, slow, and lifeless, whether consider it as a Passion; or as a State of Circulation of the Fluids thro' our Canals. *Scorbutick Headachs* are produc'd from Humours impacted strongly into the smaller Vessels, and distending the Membranes fix'd to the Bones: The glaucous State of Humours disposes them stand still, or, at least, to fix upon the Parts, and if the Pains are internal, they are hard to take off; but if they are external, Rubbings, or Bleedings, by their volatile and warm Parts, dissolve and attenuate the Humour, and set it in Motion. If we consider the Symptoms it produces on the Surface of the Body, there we find rheumatick Pains, which wander from Place to Place; when the Vessels circulate our Fluids, the Salts, if many, press upon their inner Surfaces, and, in Proportion to their Acuteness, the Pain occasion'd is greater or less. *Spots* are Extravasations of Blood which happen from the Erosion of some minute Vessels; and the Colour of them denotes the State of Humours. *Atrophies* are Deficiencies of Humours; if the Blood is too sharp, it becomes colliquative, and being continually and fretting, runs off at every Passage, Stool, Vomiting, Spittle, or Urine: And

confirm the Sharpness of the Humours, view  
 their Urine, and see what a Crust is at the  
 top, and what a Sediment at the Bottom :  
 'tis plain the Serum is stock'd with more Salts  
 than it can well dissolve, and these Crusts  
 and Sediments are but *Crystals*. From this  
 anatomy of the Scurvy, it is plain, that a  
 scorbutick Blood is a Blood abounding in  
 salts, whose Nature it behoves the Physi-  
 cian to distinguish well : Salts of all kinds  
 will irritate, but all of them won't thicken  
 the Blood : If the Blood be too gross or too  
 thin, 'tis made so by these Salts entering in-  
 to the watry and oily Parts of it ; and as the  
 quantity of Salts has such general Effects  
 upon the Mass of Humours, therefore the  
 Scurvy abounds almost every where, not in  
 Northern, but Southern Climates also ; for in  
 Northern Countries it is plain, that their  
 Sea-Salt abounds with Sea-Salt, or however  
 with some mix'd Salt, in which the Acid  
 is the Dominion ; and in this Case the  
 Blood is chill and apt to stagnate in the smal-  
 lest Vessels ; and as it is saltish, it irritates  
 the sensible Parts into Contractions : This,  
 say, is the ordinary Scurvy we meet with  
 in the Northern Parts ; but yet this Scurvy  
 is not so common, as to exclude a corrosive  
 State of Humours even in *England* ; for we  
 daily meet with consumptive and hectical  
 Persons, whose Stomachs plainly demonstrate  
 an abundance of sour and corrosive Humours

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lodg'd in them, as appears by their belching a hot sour Humour, which frequently gives them the Heart-burn; and the Free-living they indulge themselves in lays a certain Foundation for this Change: That Acid which before was an earthy one, becomes corrosive, and raises Hypochondriacism and all its Attendants. Besides this Scurvy there is another, more observ'd in the warmer Climates, where the Blood becomes saline, it is digested into a pungent volatile Salt. None make more use of *Olio's* than the Foreigners, and the warm Ingredients they are mix'd with, are but so many volatile Salts, which are with great Gust thrown down into the Stomach, and there digested and hurried into the Blood: Salts are always pungent according to the Figure they are in, they prick the Surfaces of the Vessels through which they circulate, and therefore contract and twitch them into Contractions, and thereby first dissolve and attenuate the Blood, and then, if they abound, they give Uneasiness to the Vessels; 'tis true, of the two, volatile Salts are the least dangerous, but they render the Blood, render'd too thin by them, is subject to Bleedings, to Scurfs, to Hæticks, to spasmodick Pains, and many other dangerous Disorders: From whence 'tis worth Enquiry, how these several States of Humours may be alter'd with Diet: In general it may be affirm'd, that Salts are dissolved

Solv'd in Element ; Water is the proper  
*menstruum* for dissolving them all ; and  
 therefore in any Scurvy, Water-drinking is  
 commendable ; but then it ought to be con-  
 sider'd, that some of the Properties of Wa-  
 ter are not convenient in them all without  
 caution : So in the *Cold Scurvy*, drinking  
 cold Water may set the Salts loose, but may  
 regulate the oleaginous Parts, and freeze the  
 rest, so that more Harm is done than can  
 be balanc'd by diluting the Salts ; we  
 experience this every Day in such Consti-  
 tutions, where the Water drank cold gives  
 Valetudinarians the *Colick*, bloats their  
 ins into *Anasarca's*, and obstructs their  
 vessels, gives them Jaundices, and curdles  
 the Chyle into caseous Concretions ; the  
 Food being already viscid, the Cold pre-  
 vents over the diluting Quality, and they are  
 greatly damag'd thereby ; but Water qua-  
 lify'd with heating and obtunding Particles  
 is certainly of Use ; it dilutes and sheathes :  
 for this purpose Bath-waters drank at the  
 Fountain-head are salutary ; they eminently  
 affect the Acid by the Steel and Sulphur  
 they contain, and insinuate themselves by  
 Heat, as well as dilute those Salts, and  
 carry them out of the Mass by the Pores,  
 Kidneys, and elsewhere ; but in the *Scur-*  
*vy* proceeding from too acrimonious Salts,  
 or Salts too much concentr'd, from cor-  
 rupt Salts, the *Bath-waters* ought to have

no Share ; 'twere better for such Patients to confine themselves to pure Element, without Additions, or however without such would heat and accelerate the Blood's Motion ; Chalk-water, or Steel-water, if light are useful in this Case, because they dilute and alter the Acidity by which so much Harm is done ; but where it is plain the Blood is too volatile, as we guess by a *nidorous*, bitter and salt Belchings, then Water alone is the best Diluter ; and if any Addition is allow'd, 'tis such as will make into *Lemonade* : This Scurvy our Sailors labour under, when they are cur'd by eating Lemons and Oranges, which they find plentifully in the *Streights* and elsewhere. And as the Liquors of *Scorbuticks* must be watry, so must their Diet ; for in the *low Scurvy*, where the Mass is coagulated by the Acid, we give them Orders to feed upon Lads and fresh Meat, farc'd with *Nasturtiums*, Horse-Rhadiſh, Mustard-seed, Marjoram, Thyme, Sage, and such-like. In the *Scurvy*, where the Blood is near the Condition of being dissolv'd by too acrimonious an Acid, we dare not advise these Spices or Herbs, for fear of raising Tumours and Commotions ; but yet bitter Waters which are not eminently such, and which are also watry, such as Dandelion, and watry Tribes of Bitters, may be administered because they correct the Tartness of

good calmly; they dilute and alter its Texture without encreasing the Thirst and Heat. In the *Hot Scurvy*, where the Mass is too much thinn'd by its volatile Salts, \* the Mads should consist of Sorrels, Barberries, and four Fruits: How different then is the *Scurvy* from itself? The Word is *equivocal*, and is us'd in a different Sense by the best of Authors. It became a Fashion, and is yet a sufficient Answer to Patients, when they enquire into their Ailments, to give this Reason to a troublesome Enquirer, that their Disease is the *Scurvy*; they rest satisfied, that they are devour'd with a Complication of Symptoms; while the Physician perhaps in dispute with himself how he shall treat the Patient, nay, and perhaps is watching to find what Diet agrees or disagrees with them: We all know the feeble Twigs of Discovery of the Cause by the † *Juvantia*

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The Symptoms in the Salt Scurvy may be the same as in the Cold, but they are produc'd in a very different manner. For Example: The *Asthma* in this Scurvy, arises from Rarefaction of the Mass and Distention of the Vessels; so the Air-Chamber is lessen'd, whilst the Passage of the Lungs is impeded in the Cold Scurvy from Stagnation and Accumulation. And some Salts are attractive, others repulsive, notwithstanding their Surfaces: For if Acids and acid-Salines consist of plain Surfaces, and are therefore attractive, what Reason can be given that volatile Salts of Human Blood, being rhombical, and of Hartshorn, being Parallelopipeds, should not have the same Cohesion as well as acid Salts, which are Cones or Cubes, which is Cubical.

What helps. What hinders.



and *Lædientia*, and yet we must have Recourse to them, where the other distinguishing Signs are wanting, or fail us. From which it is evident, that the Diet of *Scorbuticks* is never uniform, but must be governed by the Knowledge of the State of Juices then reigning; and as that State is not to be determin'd, but by the Knowledge of the several Causes, it would be empirical to affirm, that *Scorbuticks* must always insist upon the same Diet, since they have an equal Chance of being prejudiced or benefitted by this Uniformity: How then can a Man fraught with Learning, as Dr. *Cheyne* is, endeavour to perswade the World into an Opinion that the Scurvy is always the Produce of Salts that coagulate or obstruct, and make a glewy Serum, when he surely knows this is not constantly the Case? But above all is very surprizing, that he should here commend a vegetable Diet, and the Reason for using it is yet more so; the Diet recommended is often of the same Nature with the Juices, and no volatile Salts can be produced without a Change made in the Plant by Assimilation or Putrefaction: Surely if the vegetable Diet be glewy (and many he recommends in the Case are such) following his own Sentiments, he would render the Juices more deprav'd; and, if the Rules of Chymistry have any Force; the Chymists themselves do acknowledge, that the

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changes the Texture in some Circumstances, and particularly, in producing the Salt mention'd in the Manner it is done; this Truth is in Part allow'd by him in *Brandy* and *Lime*, because in that Case serv'd his present Occasion; and moreover the Doctor mentions the urinous Salts as the Occasion of the Scurvy, I doubt whether upon Enquiry it will be found, that mixt Salts, as such, are the Cause of the Scurvy, but as the Acid prevails, which is serv'd by making it *urinous*: This Assertion is too plain to be deny'd, and too easy to be explain'd.

In *Madness*, there is a Rage and Raving, attended with a Fever, or a feverish Disposition: In bilious Persons, where the Blood and Spirits move on with a certain Precipitation, their *Actions* answer their *Idea's*; and *these*, the Influx of Spirits, which when they exceed the natural *Momentum* to a high Degree, they cease to be governed by Reason. It must be confess'd, we know no further of the Union between Soul and Body, than that if there be an harmonious Proportion between the Fluids and Solids, our Senses are vigorous; but are disturb'd, where they fall short of, or exceed the natural Constitution. 'Tis not easy to determine, how far some Mens Nerves will bear stretching or relaxing, before un-

couth Effects will ensue, Experience alone instructs us in this Affair; however, it is very observable, that mad Peoples Nerves are strongly extended, and are very elastick the Strength they abound in, and the little Damage they receive from the severest Weather, plainly shew, that they are become almost inflexible, or, however, that they are at the Tip-top of Elasticity; the Pulse also confirms this, which is swift and great.

BUT in *Melancholy* the contrary happens the Idea's are unconnected, but the Pulse weak and slow. I have already given the Reasons of this Disease, under the Paragraph of the Scurvy, and shall not here repeat them. Let us then descend to the particular Diet of use in these two Cases: *Madness*, we must be sparing in the Use of Victuals, for *Fasting* supplies the Want of Evacuations, which are used repeatedly in this Case, as any one may see, who consults the Files of the Physicians practising on this Disease; and for the rest, it must be cooling and moistening, and therefore Water-drinking, Barley-food, and all Grain made into Food, is the most convenient; Lettice, Cucumber, and cooling Sallads are commended, they must shun all strong or fermented liquors, all salt Meats, all Spices, and all Victuals which are flatulent, and in this Manner the bilious Humours will in

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temper'd and alter'd, and the Fibres will  
unbent. But, in a fullen Madness, where  
there is a contrary State of Humours, the  
diet must be chang'd: Indeed, as there is a  
tumult, or some disorderly Motion in the  
brain, the vinous and fermented Diet, if  
long, is to be forbid; but still the Diet  
must be moistening, and gently attenuating;  
therefore they may be allow'd small Wine,  
small Beer alter'd with gentle Bitters, in  
moderate Quantity; their Diet may be  
moderately farc'd with Aromatics, the Pre-  
parations, containing Centory, Fumitory,  
Calamus aromaticus, Galangal, Cloves,  
Cassia lignea, Antimony, and Steel being  
them'd specifick in this Sort of Raving,  
plainly shew us, with what Ingredients  
their small Liquor should be impregna-  
d, and what their Meats may be farc'd  
with.

In *Head-ach's*, the Causes vary extreme-  
ly, but three Causes of it are the most com-  
mon; to wit, a Plenitude, a bilious, and a  
plegmatick Blood. In a full Habit of Bo-  
dy, where the Quantity only exceeds, Care  
should be taken to abate a proper Quantity  
of Victuals, and particularly of Drink, at  
every Meal. In our Temperaments, there  
is no standing still, they vary some Points  
every Day, and if the Quantity of Hu-  
mours be too many for the Vessels, they  
lose



lose their due Elasticity, and the Blood Consistence; for as the Force of the Vessels decreas'd, the Blood will be but lazily mov'd on, and will then contract a Thickness, and become obstructive; the Disease will then become compounded of a Fulness and an Obstruction, and we must not only subtract a certain Proportion from our Meals, but we must also have Regard to the Obstruction, which is a Creature of Excess; and therefore we may allow Aromatics and Spices in their Diet, which must, however, be also spare, and this Obstruction is known by the Colour of the Face, then turning pale, which before was a lively Red.

IN the *Bilious Headachs*, the Pulse is quick and strong, and the Patients are exceedingly warm: In this Case, the Salts are powerful enough to tickle the inner Surfaces of the Vessels, and thereby accelerate their Sympulse; but the Blood is yet viscous enough to stagnate in the minutest Arteries; and if a Parcel of such a Blood chances to stand still any where, and the Vessels of the Extremities are small enough, or rather too small, for such a viscid Liqueur, the Salts soon extricate themselves, and twitch the sensible Membranes into painful Spasms: It behoves the Physician strictly to enquire, whether the Pain be internal or external, or both; because

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greater Haste is requir'd, and quicker Dispatch is to be made with an internal Head-ach; it threatens Madness or a Phrenzy: view their Eyes, if their Veins are swoln, and if their Memories or Understandings be so affected as to be forgetful, or duller Apprehension than usual, it is very certain that the Seat of this Pain is on the *Meninges* of the Brain: But if none of these Signs appear, and the Head, upon rubbing or rubbing, feels painful, then the *Cranium* only is the Seat of it, and we need not be so apprehensive of the Consequences. In this Head-ach, the Diet and Drink must be cooling and thin; thin, to abate the viscid State of the Bile, but cooling, to correct the lixivial and nitrous Salt, which Bile abounds with. Water-drinking, whether elemental, or lightly chalybeate, is commendable, it washes and thins the Viscosity, as well as keeps the Salts at a proper Distance from each other; and *Sorrel*, *Lemons*, *Oranges*, and all the gentler Sours correct the lixivial Salt, and turn it into a neutral: Our Salads and Sawces ought to consist of them; and as this Head-ach is an effect of Bile lodg'd, *this* being wash'd off, remov'd, and alter'd, *that* must, of Course, be.

In a *Phlegmatick Head-ach*, the oleaginous Parts of the Blood are thicken'd up with

with an Acid, and a good deal of Earth with some Water interspers'd; these are discover'd by the Dulness of the Pain, and Weight upon the Head, and the Temperature is cool, nor have they any Thirst upon them. All Sense of Weight proceeds from some Degree of Grossness, for Nothing stagnates, till it becomes too gross for passing the Diameters of the Vessels; if the Motion of the Fluids be too sluggish, they thicken of Course, and more particularly if their Mixture be of such a Composition as is naturally cohesive: Such is a phlegmatick Blood; its Parts are heap'd up together, by the Figure and Hardness of the Salts entering the soft and globular Molecules of the Oil, by flattning them, and joining two into a large one, and as they grow larger, they attract each other, and others stronglier, and thus the whole Mass becomes gradually cohesive. Destroy the original Cause of this Cohesion, and we remove this phlegmatick State, and abate all the Symptoms depending upon it: That is, we administer *Aromatics*, such as Thyme, Rosemary, Marjoram, Sage, or Savory; we order them *Pungents*, such as *Nasturtiums*, Horse-Rhadiſh, and Mustard-seeds, in their Liquors or Victuals; these contain Particles of an opposite Nature to this Acid, will insensibly re-dissolve the congeal'd Particles, and set them free, and disengage the

from the Parts they have taken up their  
mode in. I have not meddled with the  
yet in such Head-achs as proceed from  
one Cause fixt in the Fibres; this Cause  
may be irremediable, and the Diet can  
have no greater Effect than Medicines,  
which have no Power to remove it, only  
where we see no Hopes of relieving the  
original, we ought to relieve the most  
gent Cause, and this may be effected  
well by Diet as Drugs.

A *Vertigo* or *Giddiness* is easily known,  
its Causes are numerous; I mean its  
remote Causes are not easily fish'd out:  
it is evident that the feverish and the  
phlegmatick are equally affected; for how  
usual is it with Persons under Fevers to  
complain, especially at the Beginning, of  
their Brains turning round, if they only  
lift their Heads up from the Pillow; and  
Persons of a low and despirited Habit,  
whose Stomachs are stuffed with Phlegm,  
complain of it frequently: So that what-  
ever immediate Cause it may have, or  
however that may always be the same,  
the remote one evidently differs; let the  
distention of the Artery happen how it  
may, and the Removal of the *Retina*, from  
its place out of its Place, yet the original  
Cause must be principally regarded by  
Diet; for in *Phlegmaticks* we must in-  
cise



cide and attenuate ; by these Qualities Juices will be rendred more fluid, and become less liable to stand still any where by these Properties the gross Phlegm taking up its abode on the Coats of the Stomach, will gradually be melted down and will make Part of our Nourishment in mixing with our Victuals, and running thro' the Lacteals to our Blood : Whilst sojourn'd in the Stomach, it sour'd, and twitch'd the Membranes of that Part and the Nerves into Tremblings, which being communicated to the Brain gave it a tumultuous Motion, and affecting the tick Nerves, as has been already explain'd occasion'd a Dizziness: In this Case therefore Bitters, Pungents and Aromaticks are highly necessary, such are Tea, Coffee, Marjoram, Sage, Lavender, Horse-Rhadi- Mustard-Seed and the like, in Teas, Liquors or Meats. But in the Giddiness rais'd from the warmer States of Blood we must change our Views, the Giddiness then depends on the too rarefied State of Juices ; when the Vessels are stretch'd beyond their Power they lose their contractile Force ; and by consequence the Juices are not thrust forward as usually. This Power is soonest lost where the Diameters of the Vessels become less ; for the Arteries are conical, their Thickness decreases in a regular Proportion as they approach

approach nearer to the *Vertex* of the  
ne; and as the Thinness of the Coats  
an Artery in one Place more than ano-  
r, is the Reason of their bursting sooner  
one Place than another, the same Thin-  
also holds good for their losing their  
sticity at the Extremities sooner than  
-where; and moreover as there is ano-  
Cause of Vessels bursting, namely, the  
ght of Liquors in them, so that the  
her any Liquor rises, the sooner is the  
el burst under that Weight, so the  
er we approach to the *Vertex* of the  
ne, the more Pressure there is upon  
Extremity; upon these Accounts, to  
the Thinness of the Vessel and the  
ght of the Fluid, it happens that the  
illary Arteries sooner lose their Elas-  
tity than any others; this being a Truth  
prov'd by Experiments, it follows,  
when the small Vessels are over-  
tch'd, if they don't crack, they howe-  
lose their contractile or systaltick  
ce; and the Blood moves on then by  
Weight only, and is therefore subject  
congeal and stick close to the Walls  
the Vessels, and so stand still; But the  
er Parts of the Vessels not having lost  
ir elastick Power, throw the preceding  
ids with Force into these small impac-  
e ones, and they extend themselves on  
Sides to receive them; this Distention  
lifts

lifts up the nervous Filaments of *Retina*, which receives the Pictures of Objects; that is, it makes Things appear that Place where they are not, and where the Arteries are in their *Systole*, they appear where they really are; this changeable Condition of the Pictures appears one while in one Place and anon in another, is call'd a *Dizziness*, arising *Bellini* observ'd, from the Dimotion or Displacing of the *Retina*. If we consider this State of Motion and Rarefaction of our Fluids, we shall find this Giddiness to disappear, or however to lessen; as this cannot be done without having regard to the Degree of Rarefaction, I refer the Reader to what has been said concerning the Diet in Fevers: How does a Bleeding take off a *Vertigo* in Fevers of the warmer Species? And abatement of the Rarefaction by cooling and diluting Diet, has an analogous effect.

IN a *humid Asthma* two Things are to be consider'd, to wit, the *Interval* and the *Fit*; these Shortnesses of Breath in the *Interval* depend on an habitual and increas'd Secretion of serous Humours into the Vesicles of the Lungs, spued from the Glands thither; Secretions are in Proportion to the Orifices of the secretory Ducts;

as the Glands of the Lungs, by being constantly soak'd in watry Liquors, become relax'd, they are larger than a natural State, and therefore they secrete more Liquor into the Vessels; so much that the Quantity extravas'd in them, and hourly thickening by being expos'd to the Air in Inspiration, presses upon the circulating Vessels, and sometimes stops their Circulation; in this opposition the Parts begin to inflame, and this Inflammation produces a Fever, and we call the Fit of an *Asthma*; this short View will lead us into the Reasons of the different *Regimens* to be us'd in *Asthas* according to the Times of the disease; for in the *Interval* they breathe short, they cough and spit much, and the slegm is viscid and tough, and not easily sp'd up; this repeated *Nisus* to cough creates a constant Influx of Humours into the Lungs, and it is very observable, that the Smoak of Towns is troublesome enough to these Asthmaticks, whom we call *Phthi-* sic, but a clear Country Air gives them relief; the Shortness of Breath depends on the little Room left for Inspiration, the Vessels being fill'd, and the *Bron-* ches being loaden with Phlegm, do not suffer the Air to enter enough for inflation of the Lungs; however, upon spitting, the Room grows larger, and their

M                      Breath



Breath is easier, which shortens again upon any Stoppage, or upon hazy Weather coming on; for this stops our Pores, and the Steams which would flie that way, recede into their Lungs, and encrease that Section: The Air of the Town is very impure and it can't be suppos'd to blacken our Pector, without working upon so tender Part as the Lungs; in short, it irritates the Wind-pipe eminently, and the Glands secrete plentifully upon every pump-Bout; so that it is common with old Anatomicks of Fortune to retire out of the Smoak of the Cities, because they are choak'd up: In this Supposition it plainly appears that the Lungs are relax'd, and that the Blood-Vessels abound with a vapid Serum upon which Account the Blood must be alter'd, and the Texture of the Lungs must be rendred firmer; such Meats and Drinks as will attenuate and dry are here conducive; when the Juices are attenuated to a certain Pitch, they will move forward in the circular Motion with greater Vigour, nor will they drop much Liquor into the Lungs, and a some Share will be lessen'd: But the warm inciding Materials do also contract the Glands, in as much as they evaporate those Humidities in which they are soaked and enlarg'd. Therefore in *Asthma* strong Wine moderately taken, and if

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ated with Sulphur, Hyssop, Elecampane, Edge-Mustard, Thyme, Fennel, Caraway-seeds, and such like, is very commendable; digests the Phlegm; pumps it up, prevents its breeding, promotes Perspiration of Urine, and gives them much Relief; that they eat ought to be little in Quantity at once, and of such a Nature, as may be moderately warming; Spices are always of use to Asthmaticks, provided they don't indulge in their Use, for no Conclusion can be drawn from Degrees; little may be useful, but a small Excess is a great prejudice; and Incisers moderately help to pump up the Phlegm, but if they are us'd too much, they exhale the humidities, and thicken his Humour so that the Blood will be brought up with that Quantity which is requisite to bring up the Phlegm. Thus must Asthmaticks be kept out of the Fit; but whenever an irregular Life, or Debauches, catching Cold, or too much Exercise have rais'd a Turbidity in the Blood, so that it stops in the Arterial Vessels, and inflames the Part, or the adjacent ones, then this being immediately hazardous must be reliev'd; what we can do is to treat them as we have already said in the Paragraph of Inflammations, till the Fit is over; that is, we dilute and cool.

AN *Incubus* or *Night-Mare*, is a Sense of Load upon the Breast whilst asleep, and is suppos'd to proceed from a Stoppage of the Circulation, either in the Nerves or Blood-Vessels; or a Convulsion on the respiratory Muscles: They who feel a Load and Weight on their Breasts upon the Intermision of their Pulse whilst awake, may be said to be hagg-ridden: The Ideas in the Night and the Apprehensions attending in the Day seem to bear a near Alliance to each other; and moreover my Pulse having been often attack'd with both these Disorders, I have felt the same Impression and Disorder upon my Pulse upon awaking, as I did when I have been seized in the Day-time with an Intermision of Pulse, which I was seiz'd with by drinking bad Wine: The Intermision might proceed from the Spirits as well as the Blood, having at the same Time an unusual Weight on my Head, and Startings on the Tendons, along with a Despondency; then the Intermision was a convulsive Motion rais'd from the Acidity of the Juices, for my Stomach was then inflamed with acid Ructus; and volatile Spirits taken in a plentiful Manner, and diluted with Water, took off the Intermision with its Attendants. Since then it is evident that this Disorder often depends on

Sp

Spirits, they being variously affected must indicate different Diets, as the State they are under is various; doubtless in warmer Climates or Constitutions, where Persons are subject to this Disease, the Cause squares in all its Changes with Convulsions properly so call'd, and then the Diet must be such as is there mention'd; but in the common *Night-Mare* 'tis equal, as to the *Regimen*, whether it proceeds from a stop in the Blood or Spirits, for in this case the Diet ought to be warming, attenuating and cordial; Strong Wines therefore moderately taken, or in such quantity as to refresh, are the most convenient Liquor to be us'd; and the Victuals should be well stock'd with Spices and Aromaticks; and here Broths, in which such warm Ingredients are gently boil'd, are the most proper Food; they enter the Blood very quickly, attenuate it, afford Spirits in an instant of Time, and set the Blood and Spirits in Motion: This Cordial Vertue in warm Liquors appears upon Faintings, where they revive as soon as they are swallow'd; some of the Particles immediately put the *Papilla* of the Tongue and Stomach, and the Nerves, whose Extremities they are, into Vibrations and Undulations, which set the stagnating *Fluidum Nervorum* into Motion, and they do not only afford this present

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Relief,



Relief, but their reviving Particles are carried into the Vessels, where they once more attenuate and set in Motion the stagnating Fluids. I must however observe to you, that these *Night-Mares* are more always produc'd in the Manners above said for a large Meal at Bed-time along with a supine Posture in their Sleeps, will bring them on effectually: To hinder the Deflux of Blood into the lower Arteries, or indeed to hinder the Circulation in the lower Parts is a Weight laid upon the Vessels, and is sufficient; and as a supine Posture lays the Weight of a large Superper directly upon the descending Trunk of the Vessels, the Circulation in the lower Parts is in a great Measure obstructed; wherefore the whole Mass circulates for a Time in the upper Vessels; this Interruption fills the upper Vessels too much, and we know moreover, that whenever the Blood is broke of its regular Course, it rarefies and ferments as we perceive in so small an Interruption as is occasion'd by the *Pericardium* and upon this Account also the Fulness is augmented; now when the Vessels become too tense, they lose their Elasticity and Spring, and the Fluids run lazily or not at all for a while, till this Resistance is conquer'd, and thus also *Night-Mares* are occasion'd; here we should

avoid all flatulent Diet, and be moderate in our Suppers, since they who will offend must suffer.

As for a *Defect* of *Memory*, we observe both the dry and the moist Constitutions to be the Occasion of it: Old Age and Paralyticks testify this Assertion; where in the first the Fibres grow rigid and inflexible, and in the latter, soft, lax, and incapable of Vibrations; In the first, the Spirits are scanty, in the latter none; there is in short a Mean of Siccity and Flexility requisite for Memory, what that cannot be easily determin'd; only when there is no Revocation of Ideas, Memory is lost, and Diseases destroying it retain to either Kind. I knew a Lady attack'd with a Dropsy in the Cavity of the Belly, who moreover was troubled with an *Anasarca* all over her; she had lost her Memory so far, that she would ask the same Question twice whilst she was led the length of a large Room: The Catharticks, which were requir'd to empty the Redundance of her phlegmatick Humours, cur'd her *Anasarca* and Memory together, which she retains to this Day, tho' above seventy. Another by frequent Debauches of Brandy was under the same Circumstances; the Liquors left him feverish, and forgetful of every Action in Life; they

had therefore made his Fibres too rigid and dry, which recover'd their natural Tone, by a forcible Substraction of the cherishing Cause, by Bleeding, gentle Lenients and Diluters. This Disease then must be variously handled by Medicines, and the same must be said of their *Regimen* in Diet: Uniformity in Diet is a contemptible Mistake for Valetudinarians; the *Sickly* differ from the *Diseas'd* only in Degrees; the Diminution or Abolition, the Increase or Decrease, the partial or total Depravation of our Functions argue a Disposition to a Distemper, or an actual Disease; the Diminution, Decrease and partial Depravation of our Actions betray a valetudinary State, but their Abolition, their Increase, or total Depravation, a Disease. The Causes of both are numerically the same, only the Disease demonstrates a *Propagation of this Cause*; therefore the Cure by Regimen and Medicines must be the same: But we must be more speedy in the Disease, since it posts towards the Grave; whereas if the Cause acts lazily, and is not deeply rooted, Diet alone may suffice, when it is justly adapted in Quantity and Quality, which surely must be exactly pointed out. The Quantity is easily judg'd of, because the Stomachs of sickly People, for the most Part, soon give them to understand what

they have enough, they check at too much, and they ought to leave off as soon as they perceive the least Aversion; and if little the Stomach can bear is not sufficient for the Support of Life; the Meal ought to be repeated upon the least Craving; But as for the *Quality* of our Diet, a competent Skill of the producing Causes must direct the *Sickly* to the Sort of Food; which, as I have said all along in Conjunction with the whole Set of famous Physicians, must be opposite to the Cause of their *Disease*, or sickly Habits; indeed when People are in Health, the Study must be to preserve it, and, the Chyle should be sweet as Milk, the Diet ought to be simple, and composed of such Particles as are smooth and soft; but any Deficiency in this Sweetness, whether it inclines to sour or bitter, watery or saline, to phlegmatick or scorbutick, is to be amended: Thus it happens to Wintners whose Wines are a little corrupted; they are then under a valetudinary State, and if they are *sourish* they are cured with Bitters, Aromatics, and restorative Drugs; if somewhat *ropy*, with Sulphur, Lyes, and Spirit of Wine; or they are precipitated with Austeres or Styptic; if they are *watrish*, with Heat, Sulphur, Lime, and other testaceous Materials; if *oily*, with Verjuice, or Oil of Sulphur;

if



if *saltish*, with Honey; and if *stinking* with Aromatics, for a Blind, but with Acids principally, as Correctors; and *fermenting*, with Acids or Submersives. Whereas, if any Uniformity were to be made Use of for all these *sickly* Wines as Dr. *Cheyne* advises for all Valetudinarians, we should never be blest'd with the Use of one of the most delicious Creatures in the Universe; for as the opposite and various Corruptions this Liquor is liable to, cannot be amended always as we should not be able to find the Quantity the Doctor allows us in twenty Hours, good enough for our Purpose, by a Parity of Reason back'd with Experience, were we to prescribe one for all Sorts of Valetudinarians, the Benefit of most of them would become a mere Pretence that is, a standing and corrupted Liquor.

IN a *Polypus of the Heart* and Liver the following Symptoms appear; there is a constant Palpitation, a Difficulty of Breathing upon the least Motion, the Jugular Veins swell, and at last they faint away upon the least Change of Posture; as the Blood is every *Second* of Time moving forward into the Heart, it contracts It self regularly, and throws out what it receives regularly also; that is, what Quantity is injected, or in what Time soever

ves the Blood, it throws the same Quantity out again in the same Space of Time; but when any Impediment lies in the way, such as a fleshy Excrecence, or a Grume of Blood, then the Quantity receiv'd and provided, must differ in Proportion to such Impediment; and the Heart, ever and anon, receiving more than can be dispos'd of, must swell and grow large, and beat against the Ribs, which Motion is call'd *Palpitation*: And if this Impediment be fix'd in the left Ventricle, or in the pulmonary Vein, any Exercise or any Regimen that hastens the Blood's Motion, will fill the Lungs to such a Degree, as to make them rigid and incapable of re-ventilating the Air, and this we call *breathing short*; if the Blood finds little Passage thro' the Lungs, all the return- ing Vessels must swell of Course, and therefore the *Jugulars swell*; and when the Case is confirm'd, any Change of Situation by which the Passage is block'd brings on a full Stop of the Blood, the Heart ceases to move, and the Spirits expire, and thus they fall into a Swoon, in which, after some few Fits they die; as I observed in a Gentleman seiz'd with this fatal Disease. Under these dismal Circumstances, many more are plac'd than is imagin'd; because they are treated as Asthmatics, with Pectorals levell'd at the pumping

pumping out the imaginary Phlegm, begin to be surpriz'd at the ill Success of their Medicines with which they have used so many; in short, the Patients, tired with fruitless Attempts, change their Physicians often in Hopes of Relief, which is not found but in the Grave. This cannot vary from it self, nor can the *Regimen* be alter'd with Respect to the Case; for as no Medicines are yet found to eradicate internal Excrecences, and Concretions are too often found remanent, *Concretions* and *Excrecences* become equal Impediments and equally incurable so that, as nothing conduces towards Recovery, we are to content our selves with prolonging Life, which can only be done by having an Eye to the prevailing Symptoms: These vary much, and it cannot be determin'd how they are to be relieved without making Excursions foreign to the Business in Hand; however, it may be affirm'd, that a Rarefaction or thinness is one of the main Symptoms indicating Relief; and that our Care, so far as belongs to Diet, ought to be levelled at the Quantity; they in short must receive Nourishment with as sparing a Hand as their kind of Life they follow require; they must take such Nourishment, as does not dilute the Blood; and yet keep it from moving too fast on; nothing gross can

pro' the *Lock*, and they can dispense with  
no Hurry of Motion: And so much for  
the *Quality* also of the Diet; only cold  
bath-waters, or light Chalybeats for com-  
mon Drink are commendable; because they  
keep the rest of the Blood from running  
into Concretions, which it is apt to do up-  
on Stops so extensive as are made by these  
*Polypus's*; the most temperate and abste-  
mious Persons as to Liquor, being observ'd  
to be most frequently seiz'd with this Dis-  
ease, gives us a Handle to advise such, as  
eat plentifully at Table, to make freer  
use of Liquor, to dilute their Victuals, than  
others who are more sparing; they ought  
to eat less or drink more; what a strange  
figure does a Load of Victuals make in  
the Vessels without more to dilute them:  
it is possible if they dilute heartily, the  
Chyle, being thin enough, may go on in  
the Vessels with ease, and their Remedy  
for this full Meal is to fast it out; but  
when they have swallowed down a large  
quantity of Victuals without diluting  
them, they make a doughy Chyle, and  
it is no Wonder if it clings to the Vessels,  
on occasions the Disease we are speaking  
of.  
A *Tingling Noise* in the Ears, so trifling  
a Disorder as it may appear to be, is yet  
troublesome to such as labour under it  
as



as to make their Life uneasy, they must have a great deal of Spirits, not to appear out of Humour; even the most lively are struck with Melancholy, when the Disorder sticks by them for a Time: The Reason of this constant Tingling does not depend on the Motion of the Air into, or out of the Passage of the Ear; because, if you apply a Feather or a lighted Candle to the Ear, and they are neither drawn in nor mov'd at all, nor therefore does that hissing Noise perceiv'd upon the Application of our Hand and removing it a little off the Ear, depend upon a fresh Admission of Air into this Passage, as has hitherto been believ'd; therefore we must seek for the Cause of this *Tingling* in the inner Ear it self. The *Drum*, or more properly its Membrane, receiving Sounds upon it, vibrates, and shaking the Bone communicates the Impressions to the Nerve lining the Labyrinth and Cochlea; the *Drum* then being too tense, and vibrating too much for the Time it continues, gives this *Tingling*; so that the Nerve, the Artery and Membrane, being all under the same Condition, are the sole Cause of this troublesome, tho' not dangerous Distemper. But how this Membrane and Vessels come to be so affected is the Subject of our Enquiry: When by any Cause whatever the Blood takes a Bent to a particular

particular Part, it is crouded and ramm'd  
 so that there is an Obstruction; and  
 the Parts are then distended in Proporti-  
 on as they are overcharg'd; this Bent con-  
 tinues for a long while, and the Effects  
 are discoverable by the Prejudice done to  
 the Function: Thus it is in the Case be-  
 comes us, upon catching cold, the Pores are  
 obstructed, the Quantity of Steams usually  
 charg'd that Way are lessen'd, and the  
 Vessels are charg'd with this retain'd Mat-  
 ter, the Circulation is disturb'd, and the  
 Vessels unable to bear the Load, discharge  
 upon any Part the most dispos'd to re-  
 ceive it; this Discharge continu'd for any  
 Space of Time we call a *Fluxion*: If the  
 Humours then are forc'd upon the Mem-  
 brane of the Ear, they distend the Part,  
 the Arteries beat harder than usually,  
 every Pulsation communicates a Sound,  
 as this Pulsation is continual, and the  
 Obstruction and Obstruction are lasting, the Dis-  
 ease is protracted: But whether the Hu-  
 mours are of a warm or cool Constitution,  
 is best known by the Effects; for if Pains  
 and Throbbings are perceiv'd, or if it suc-  
 ceeds Fevers, the overheated Humours are  
 the Cause of this Fluxion, and then what  
 is to be done by Diet, must be effected by  
 gentle and gentle Promoters of Perspira-  
 tion, and for this we must see what has  
 already said of Fevers; whereas if the  
 Blood

Blood be gross, and the Temper cool, lasts longer, but then no Pain accompanies the Symptom; in this Case we to use an attenuating Diet, as has been said in the cold States of Blood already mention'd. In both States the original Cause, namely, the Stoppage of Perpiration is to be remedied, which is also differently compass'd, according to the State of Humours than reigning; for 'tis Matter of Experience, that what will promote Perpiration in the colder Bloods, will hinder it in the warmer; because when Pores are straitned, as they always are in a warm Blood, the Quantity must be less'n'd; for Warmth rarefies the Blood, dilates the Vessels, and straitens their Orifices; so that upon the whole, in this Case also, so trifling as it may appear, the Diet must not always be the same; nor must be varied as the Causes of it differ. It is not the Goodness of the Diet we must heed, for all Diet is good, if we but know how to time it, and, *vice versa*, the best of Diet, or which Dr. Cullen reputes such, is naught and dangerous, if the Species of Sickliness is not regarded. None skill'd in Diseases, and the *Methodus medica*, will order a Diet of the same Nature with the offending Humours: A rich Diet in a viscous Blood, a vegetable Diet in a cold Scurvy, and the like. A

is Distemper Fluxion is reputed a main  
use, give me leave to observe what the  
common Methods are of diverting them ;  
bleed, give Emeticks, and Cathar-  
icks ; we apply Blisters, Cupping-Glasses,  
Leeches, Sinapisms and Cauteries, we cut Is-  
sues, we salivate, and we apply Setons and  
the like ; our Views in the Application or  
Administration of these Things are not  
always design'd principally to evacuate, but  
to change the Motion or Bent of the Hu-  
mours ; and as we have no other Contri-  
vance to bring this Change about, but by  
Evacuants, therefore we often make use of  
Evacuations to effect this Change, when we  
could wish to do the Feat without them :  
One Instance or two of this Kind will make  
us conceive the Matter more plainly, and  
show us the Truth of this Advance : Who  
is so apt to catch cold, as the tender and  
weak, the despirited and lean Carcases ?  
Upon exposing themselves unwarily to an  
easterly, or North-east Wind, which is cold  
and hazy, they are immediately thrown  
into Coughs and Catarrhs : I believe no  
man in his Senses thinks Evacuations ne-  
cessary here, otherwise than as they revulse  
upon the Term ; ) their Spirits are too  
weak for them ; but if they are not made,  
their Case becomes desperate, because, al-  
though they have too little Blood and Spi-  
rit, yet what they have are so nimble and  
N furious,



furious, that they run with incredible Force towards any Part seiz'd with a *Defluxion* and we are void of any other Ways to draw off this Bent, but of Evacuations, which are by no means consistent with their imporrish'd State; so that we set up content with a small Injury, for the saving of Life. Thus it happens also in *Low Fevers*, where the Blood is too gross for the Generation of Spirits; there are in them many Symptoms requiring *Revulsion*, but none, that I can reflect on, demanding *Evacuations*: However, as *that* is effected by *these*, and Danger is threatned, we must attempt them with proper Cautions. For Example; a Person is feverish, his Pulse is very low, and he raves perpetually, his Strength is decayed and his Tongue is black and parch'd: Is not the constant Practice of all the Gentlemen of the Faculty, to apply Blisters in great Numbers to different Parts, in order to draw the Bent of the Humours upon the Brain, to distant Parts? And this is done with great Success every Day, in those low and dangerous Fevers. Now the Evacuations alone would be of no Use, nor do we apply them for this Purpose; because one can be so weak as to imagine, that Evacuations, barely as such, are necessary, when we are oblig'd to throw in the strongest Cordials, in order to support the drooping Spirits of the diseas'd: Besides, *Lym*

a Liquor of more Value than common  
rum, as *Jelly* is stronger than the common  
roth; and that Blisters do evacuate *Lymph*,  
evident, by exposing the Liquor issuing  
om a Blister to the Air. From these two  
stances it appears, that *Plenitudes*, as  
ch, are not the sole Cause of so many E-  
cuations every Day practis'd by the Fa-  
ly, but that the Change of Motion is  
ncipally aim'd at in many Cases; nay, it  
ay be affirm'd with great Justice, that  
evulsion is the Reason for two Thirds of  
e Evacuations that are now made. All  
e World knows, what Incidents have saln  
t in this Nation, to hinder Plenitudes  
m being *now* the main Occasion of Dis-  
es; and if we consider the Original of  
e Bent of Humours towards any Part,  
shall find, that Abundance of other  
uses concur towards it, besides Pleni-  
es; namely, the Blood may be too  
p, and such Particles being fitted to sti-  
late: By Vertue of this Action, the  
res are put into Oscillations all over us,  
in a particular Manner, at that Place  
Point where this Humour lodges, so  
the Blood is hurried that Way with  
lence, and for a considerable Time;  
n which Motion, not design'd by, or  
seable to Nature, Inflammations, Fluxes,  
a thousand other Disorders attack us:  
suppose an Obstruction of the Capil-

laries should create Pain, would not the Humours be invited thither with Haste. And yet a Viscidity is sufficient to produce this Symptom: The Plenitude, which is but a particular one, is subsequent to this inviting Cause. It was, therefore, a very great Inadvertence in Dr. *Cheyne*, to affirm, that Plenitudes were the main Occasion of many Evacuations now made by Physicians: 'Twas great Pity that he, who is so great a Master in the Computations of the Laws of Motion, should forget them in so eminent an Instance, where an *Axiom* was to be made. To produce more Examples to convince you on this Head, would be needless, but of three thousand Cases, if I please, two thousand will belong to the Head of *Excess in Motion only*, and not Plenitudes, as the Doctor unwarily affirms.

*Salivations* are the Produce of different States of Blood: Sometimes it happens from a Defluxion; at other times from hypochondriac Cases. I rather chuse to mention the two Causes, because they are the most common. As in Defluxions, there is an increase of Humours from a Retention of Perspiration, some other Secretion will be encreased: The Lungs being the most tender and lax Part, and the most susceptible of this Excess of Humours, Coughs are therefore the most common Disorder

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aching cold; but in some People, the salivary Ducts are very patent, and they receive the Humours flowing in upon them, and throw them off in the Shape and Consistence of Spittle, whose Excess we call a Salivation; now, as Defluxions are never found to be so univocal, as to accompany the State of Humours only, it must follow, that the Diet of Persons under such a Salivation must not always be the same, and therefore in the *Bilious* and *Phlegmaticks*, it is, in the exalted and depressed States, not the same, but a different *Regimen* must be used; and as we have been already conversant enough on this Head, consult the *serous* and *viscous* States so often mentioned above.

IN *Hypochondriacs*, 'tis well known how much they differ in Constitutions, some of them are starving with Cold, while others of them are parch'd with the Heat of their Blood: 'Tis true, both the low and the centred Acid have one and the same efficacy in preparing the serous Part to discharge easily from the grumous, and in irritating the Fibres or Ducts of the Glands to throw off *Saliva* in a plentiful Manner, and to raise a Salivation; but yet they differ in this Particular, that *Excess of Heat* must require a very different *Regimen* about their Diet and Drinks, from an *Excess of Cold*, which



which is the Case of many *Hypochondriacs* and *Hystericks*; and, as it was observ'd in the Scurvy, that it did not always require the same Management, so I say of the *Hypochondriacs* and *Hystericks*, that in the cold State, all the Poignants, all the Aromatics, all the Bitters, all the high Dose of Mustard, Peppers, *Nasturtiums*, Horseradish, Hops, and such like, are permitted, nay, are requir'd, whilst they would inflame the warmer Species, as to encrease their Thirst, raise vast Turmoiles in the Spirits, and even dispose them to Madness; but, on the other hand, the cooler Diet, the watery Element, of slimy Things, as Gruels, Panadoes, Jellies, Creams, Milk Meats, and Puddings, would so encrease the cold Species, as to introduce deep Melancholies, or, at least, leading Inflations, Constrictions on the Breasts, Choakings, Concretions of Blood, and many more. So that such sickly Folks, who may be reckon'd true Valetudinarians, are not to be manag'd always alike, because Diet must alter, not encrease, a deprav'd State of Humours, as has been often said, for indeed *Hypochondriacs* are *Scorbuticks*; and such must use the same Diet, as has been order'd in the Scurvy, which is an equivocal Name, as the most unskill'd may easily discern.

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*Hæmorrhages* differ exceedingly in their original Causes, as we shall easily perceive by descending to a few Particulars. The immediate Cause indeed is always the same, and does also indicate a particular Regimen of Diet, which is often contrary to the original one, yet more urgent than it; for Example; An Hæmorrhage of the Womb is produc'd in various Manners, namely by a Blood too much attenuated with volatile Salts in it; the Blood in this Case is rarefied and swells out the Vessels, and breaks them: Here the Regimen must be cooling and dieting, that the Salts may be alter'd, and put at distance from each other; and for this you must consult what has been said in the Paragraph of the *Scurvy from volatile salts*. This Bleeding often proceeds from too great a Quantity of Fluids in the Vessels, stretching and breaking them; Here what we can do by Diet, is to keep the Body low, by refraining from Wines, and by Fasting, till we have brought the Blood to such a Quantity as the Vessels can hold with ease: the Grossness of the Blood be the Occasion of it, (and it sometimes happens that Blood too viscid fills the Vessels every where with obstructions;) if by virtue of these they are stretch'd too much, where the Vessels are tender, and not fortify'd enough with Covers and Flesh, and where moreover they are inclin'd to throw off Blood, they will open, and

a Stream of Blood will gush out : In this Case we must use all proper attenuating Diet to dissolve this Cohesion ; such are all the bitter, pungent, and aromattick Diet in Victuals and Liquors, as you may see above. Or if this Excess depends upon a Suppression elsewhere, as the Blood-vessels are fill'd in the manner just mention'd, the same Diet is proper. But let the first Cause be what it will, if the Blood runs in a full Stream the Patients wou'd lose their Lives before we could alter their State of Blood ; and therefore, tho' Emplasticks and Astringents may be very often inconvenient for this State, nay, and may even augment it, yet they must be put in Practice to save a Life : therefore a Rice Diet, a Sago Jelly, all Jellies, Calves-feet, Red-wine with Water, Medlars, Quinces, Millet, and any Victuals made with Almonds, Flummery, and such like, are necessary, and are all that can be effected by Diet : We must then avoid salt Meats, all things season'd with Pepp'rs, Pungents, or Aromatticks ; for altho' this might be proper, to take off the antecedent or remote Cause, yet the conjunct or immediate one, won't suffer that Attempt to be made with Impunity. In short, let Hemorrhages proceed from what Cause soever, the Caution is first to be strictly observ'd, that the *Fit* of Bleeding requires an astringent and emplastick Regimen ; but the *Int*

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a Diet proper, and fitted to the first cause, which differs infinitely, the Fluids being always to blame for this Excess, because the Womb, as other Places, may be *ulcerated*, and where the Fibres are eroded as to be left bare and open, the most and least curable Bleedings ensue; and who's Stypticks are not the most convenient Medicines for an Ulcer, yet that Consideration is of little weight with us, if we reflect on the immediate Hazard the Quantity of Blood issuing so hastily forth puts the Patient under: From whence it appears, how great an Analogy there is between Diet and Medicines; so great is it, that we cure the extraordinary State, as we would cure the disease that State tends to: And from this Analogy also it is plain, that it is the utmost folly to imagine that every sickly Person must be treated the same way; much less States tending to any Fault in our Bodies, to be treated with Diet or Medicines that evidently encrease this preternatural State: No, Diseases differ in their Causes, but Valetudinarians and the Disease'd differ only in Degrees; so that such as the Cause of the Disease should be, with the proper Methods, must the Valetudinarian be treated: What has been said of one Disease, may be affirm'd of all.

IN



In *Catarrhs* the following Symptoms appear; from catching Cold, Matter flows from the Nostrils, Eyes, Jaws, Mouth, Testines or Lungs; the Body feels all over weary, Shiverings seize them; they complain of a Heaviness and Dulness of the Heads; they are feverish, towards Evening especially; they often sneeze, and their Nostrils are stopp'd up so that they can hardly breathe; they are often troubled with Pains and other *Defluxions*. The Reasons which Symptoms are easily accounted for because whenever the Pores are obstructed the Matter of Perspiration is check'd, and the Vessels are fill'd too much with a thick Liquor, and they run over *quâ datur Pluvis*: The Weariness is a sign of Fulness; in Fevers, or hazy Weather, where the Vessels are full with a Rarefaction of the Fluids or a Retention of Matter, this Weariness is a common Symptom; the Pressure hinders the Influx of animal Spirits, and from thence causes an Inability: The same Heaviness produces the Dulness and Heaviness by pressing on the Brain, and hindering the Influx of Spirits: They are feverish, by reason of the Particles retain'd, which, being of a fermenting Nature, raise a Struggle in the Blood; and more particularly towards Evening, when the Sun receding, leaves Darkness upon the Surface of the Earth, which closes up our Pores; Pains and Defluxions are easily

tion'd by the Tension of the Vessels, so that the Fluids stand still in some Parts, and hinder the Circulation; by which Accident the whole Blood is blown into a Struggle, and running violently into the Parts raises these symptoms. In *Catarrhs* we are seriously to consider the Nature of them; the Fever in some very remarkable, in others hardly observ'd; the Blood also is very bilious in some, but in others very phlegmatick; that the Bent is govern'd by the Humours and Fever: Where they are of a bilious Constitution, and the Fever runs high, the Diet must be *cooling* and *sparing*; *sparing*, to prevent the too great Rarefaction of the Fluids, which would endanger *Hæmorrhages*, and to serve as a Negative Evacuation; *cooling*, to set the fermenting Principles at a Distance from each other, and to settle the Blood, which is swell'd above measure: For by this *Regimen*, the Mass of Blood being enlarged by Rarefaction, is reduc'd to its usual Bulk, and the Ducts easily receive it again, and pass it off by the Pores and Kidneys; and the Vessels having lost their Elasticity by too great Tension, are brought down to their natural state; so that the Fluids and Solids being reduc'd to their usual Dimensions, all our Functions begin a-new to be regularly executed. In order to know what Diet is to be follow'd in these Catarrhs, consult the Paragraph

Paragraph of high Fevers: But where the Fever is hardly perceptible, and the Blood is of a sluggish and gross Consistence, and its Principles are rather unactive, and the Fibres are lax, there we must change our Measures; we must indeed feed sparingly by Reason of the Retention of the Perspiration; and this Caution is of Use to such who are so tender as to be unable to bear Evacuations; but the Quality of the Diet must be drying and attenuating to a gentle Degree; what attenuates, dries also: And the Advantages receiv'd by Attenuants are, the opening of the Pores, and of setting off the retain'd Particles into their proper Channels. One Circumstance ought to be observ'd in all Catarrhs, That a moderate Warmth, in Cloaths or their Rooms, ought to be encouraged, by which Regimen the Pores gently relax, and the Flood-gates being open'd, suffer the Effluvia to pass freely, as usual.

IN a *Syncope*, where the Persons fall into a Swoon with a Paleness of Countenance, there is a Stagnation, or, at least, a great Interruption of Motion in the Heart; this is always the immediate Cause, whatever be the remote one; and, as this Stagnation would subsist for ever, were it not for the sufficient Supply of animal Spirits conquering this full Stop, and afresh contracting

Muscle, and setting the Blood forward  
in; so this Cause is of that Consequence,  
to merit the whole Care of the Physician  
By-standers, without any Regard to the  
note one: For let us suppose this dispo-  
ing Cause were quite opposite, yet, unless  
give Motion to the Heart, and very  
quickly too, the Remedy would come too  
late; for all *interpolated* Motions undergo  
the Fate of complicated Cases, and must  
never be remedied together, or treated as  
*Urgents*: As we have taken a View  
of the most pressing Cause, let us see what  
may be done with Diet to refresh and quick-  
en this Motion. The most sudden Relief  
is to be expected from Wine, and Spirits  
made of it; they immediately give a Shock  
to the Coats of the Nerves, and by Vertue  
of this Concussion, the Spirits are detach'd  
more plentifully into their Channels, and  
the Heart is thereby again contracted. Nor  
is the common Method of sprinkling them  
with Water, any other Foundation, than  
that it suddenly contracts all our Vessels,  
and shakes them, so as to force forwards  
their Fluids contain'd. It is also a Custom,  
to offer swooning Persons a Glass of Water  
to drink, but this is not to be given to all  
of them indifferently; for if this Failure  
proceeds from a Blood, whose Texture is  
too compact and close, and therefore unfit  
for Circulation, 'tis easy to see of how little  
Advan-



Advantage it will be to offer them a liquor that will chill it, and make it more close; the fatal Consequence such a Procedure would have, would soon convince them of their Error: Wherefore it should never be given but to such as have their Blood too much rarefy'd, for such only will be profited by it. We see this practis'd daily in Crowds, where some Persons, otherwise in perfect Health, are apt to fall into Swoons because the Heat has swell'd their Blood and made it circulate too fast round, so that more of it enters the Ventricles at once than can be set forward, because the Quantity, wherewith the Ventricles are press'd bears too much against their Walls, and stretches them so far, that they lose their Elasticity; and moreover this Inconvenience follows, namely, that the Spirits have no Room to enter the Nerves for their Contraction; so that, till a Surplusage of Spirits conquers those Impediments, the Heart stands still; and if this Symptom happens for any Space of Time, the Patients surely die, because the Blood chills, and turns into a Cake: And, indeed, they who are subject to this Disorder, never fail of having *copious Concretions* in their Vessels at length which are very hard to conquer. In short the Case of *Syncope's* stands thus: The Blood, whether too close, or too thin, will stand still in the Heart, if more enters than

be dispos'd of; for then the Ventracles  
 ell, and are over-stretch'd; and, as the  
 adder, over-fill'd with Urine, cannot do  
 Function, but a Suppression will ensue,  
 neither can the Heart, or any of our Ves-  
 sels, in a real or metaphorical Plenitude,  
 attract themselves so exquisitely as the Na-  
 ture of the Circulation requires, and then  
 the Consequences of the most fatal Consequence  
 will follow: For as Death is an eternal  
 Sleeping, so is Swooning an extemporary  
 Death, which, if not carefully and quickly  
 regarded, proves fatal. But in the chill'd  
 State of Blood, out of the Fit, all the high  
 Scent, of generous Wines, high Spices, Aro-  
 matics, and Pungents, must be made use  
 of; whereas in the too rarefied one, Water-  
 drinking is commendable; and the Diet  
 ought to be cooling and diluting, as may be  
 seen above, in the hot Scurvy from volatile  
 Acids.

In an *Obstruction of the Menses*, the follow-  
 ing Symptoms occur; upon the Suppression,  
 the Women are troubled with Headachs, Watch-  
 fulness, a Loss of Appetite, a Languor, a  
 Pain of the neighbouring Parts, or a Pul-  
 sation, Flushings and Shiverings alternately,  
 Greenness, Colicks, Vomitings, a Short-  
 ness of Breath, especially upon Motion,  
 Consumption, with Varix's, Swellings  
 of the Legs, Inflammations, hysterick Fits, the  
 Whites,

Whites, Bleedings elsewhere, with Palpitations, Swoonings, Vertigo's, Apoplexies, Madness, Paleness all over them, and more. If the Cause of this Suppression were always the same, one Species of Disease would only be necessary; but its first Cause differs widely: For let us suppose a Plethora has introduc'd a Grossness of our Fluids as the Case stands in Dr. *Friend's Emme-  
logia*, then the Symptoms are accounted for in the following Manner: The Head proceeds from a Distention of the Membranes stretch'd over the Bones, which is very sensible, and this Fulness causes a troublesome Sensation; the *Watchings* arise from this Tension, and a swifter Motion of the Spirits through the Brain; *Loss of Appetite* proceeds from the Blood made more viscid, and the Secretions being of the same Nature as is the Blood, from whence it is taken, to wit, grosser, and less charg'd with the natural Salt, which should irritate and twitch us into a Sense of Hunger. *Languor* and Weakness proceed from a sparing Quantity of animal Spirits, which are secreted in a reciprocal Proportion to the Viscidity of the Blood; and as the Slowness of the Vessels occasions a Retardation of Motion, this Lensor is naturally generated. There is a Heat in the neighbouring Parts and a Pulsation of the Arteries, which cause whilst the Obstructions are recent,

Blood

Blood's Motion is accelerated, and the Salts, is charg'd with, do stimulate the Parts; that *Heat*, the Result of Motion, and *Alsatation*, the Consequence of a rarefied Blood, do much infect Women upon a fresh Oppression: But if this Plenitude arises higher, it quite destroys the Elasticity of the Vessels, and the Motion is of Course retarded, and then a Viscidity is produc'd, and this encreases in Proportion as the thinner Parts pass off; *alternate Flushings and coverings* arise from a Viscid, in which the fermenting Salts are envelop'd, and as by chance to rise up into a Struggle, or to be extricated, these Symptoms appear; the *Heaviness* proceeds from too sparing a Quantity of animal Spirits, so that Blood moves on so slowly, as to be felt as a Load upon the Parts, and this being a general Fault, it is felt all over us; *Colicks* arising from the viscid and acrid Particles separated into the Guts, and lodging there, they ferment, and raise Bubbles distending the Parts, and introducing a Sense of Pain; *Swimmings* are a Stream arising from the same source; for whatever, raising Colicks, is lodg'd in the Stomach, and becomes more refined, irritates strongly, and invites a violent Influx of animal Spirits into the Nerves and Muscles, and occasions a Vomiting: A *Shortness of Breath upon Motion*, caus'd by this *Lentor* or Viscidity sticking close

O



close to the Walls of the pulmonary Vessels; suppose then such a Person moves hastily up a Hill, the Vessels of the Legs are press'd together by the Motion of the Muscles, and the Circulation is confin'd to the upper Parts, which, in this Supposition, are loaden with almost the whole Mass of Humours; then it must follow, that these Vessels, how small soever they are become, their lining Viscid, must circulate the whole in a less Time; they will then be so overcharg'd and distended, as to become inflexible, and the Passage for the Air will also diminish'd; so that they must breathe short. The *Consumptions* of Women labour under a Suppression of the *Menses*, and generally speaking, of the asthmatick Kind in *England*, because their Blood is more charg'd with viscid than acrimonious Humours; the Glands become stuffed with gross Humours, and relax so much as to make to themselves a *Reservoir* admitting a plentiful Quantity of them, and discharging them into the Passage, and as they lodge there, they contract a sufficient Faculty to irritate the Lungs, and produce a coughing up of a viscid discoloured Phlegm, and they who would know, whether this Greenness is a Parcel of Matter or only Phlegm discolour'd, may satisfy themselves of it by an easy Experiment.

which will change the Phlegm into a Curd, but will not touch the *Matter*: This Colour of the Phlegm has deceiv'd the most sagacious in Catarrhs, which are stubborn; nor is it easy to distinguish such a Catarrh from a confirm'd Consumption without this Experiment. *Varix's* are a Distention of the Veins produc'd by a Viscidity in the Juices, which, retarding the Course of the Circulation, breaks the inner Coat of the Vein and swells it outwardly. The *Legs* swell in such Women, because they hang down; and whenever the Lymph becomes thicker than usual, it does not circulate again with ease: For the Lymph retards the Fibres of these Parts, and their Elasticity being lost, which doubtless is proportion'd to the Labour design'd it, and consequently the Fibres of the Legs are stronger than those above, the Fluids are still there and swell the Legs. *Hysteric Fits*, by all the Symptoms attending them, seem to retain to a Convulsion; if then the Occasion of them be a more plentiful Influx of animal Spirits into the contracted Muscles and Parts, then such Fits are only produc'd while the Fulness does not affect our Juices with a Viscidity; for in this Supposition the Spirits would be few, and such Fits would then properly be esteem'd temporary Palsies; because whilst some Muscles were depriv'd

of the due Quantity of Spirits, their Antagonists would then be contracted. When Women want their *Menses* they usually have the *Whites* in their stead, because the Quantity is proportion'd to the Mouth of the Glands, and they, being relax'd by the Viscidity of the Lympha, spue out the Juices separated by them; which are white, because they are of such Colour as is the Blood from whence they derive it. Bleedings are common elsewhere, because the Retention fills the Vessels, and if they are stretch'd beyond their Tone, they are able to crack. *Palpitations* are convulsive Motions of the Heart, which the irregular Influx of animal Spirits renders them subject to; the fuller the Heart is, the stronger must be its *Systole* to throw out its Contents; and such a strong Contraction continued, is a Palpitation; the *Swoonings* are the Effects of Stagnation for a while, as has been said above; *Giddiness* is also an Argument of Fulness in the optick Arteries upon whose Pulsation the *Retina* rises out of its Place, and occasions the wheeling round perceiv'd at certain Seasons. *Apoplexies* spring from the Retention, because the Vessels are over-stretch'd; and a Viscosity is bred from the retarded Motion of our Fluids; from such a State a sparse Secretion of Spirits must be expected, and a Pressure from the Stagnation, so that the Function

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Functions of the Brain, supposing a great Fulness, will be impeded, and a deep Sleep will ensue: *Madness* ensues from a lively and brisk Motion of the Blood and Spirits; this Symptom begins before the Blood becomes viscid; because when the Retention is fresh, and the Vessels are thereby much stretch'd, the Spirits are separated in Proportion to the Quantity of Fluids; that is, too plentifully, and the Motion also increases with the Quantity; so that the Spirits move in a Hurry; and shock the Vessels very rudely, and raise confus'd Ideas. The Paleness of such Women is accounted for, by taking a View of the Composition of the Blood, which is mostly viscid Lymph. In case the Matter stands it is represented to us here, the chief regard must be had to alter the viscid State of Humours, and to refrain from too plentiful and full Meals; and therefore the Consideration must not be simple here neither; while the Plenitude only abounds, and the Blood and Spirits are toss'd about in Hurry, as we plainly see is the Case in Madness, Bleedings elsewhere, and some few other Symptoms; then we are not only to feed *sparingly*, but we are also to prescribe a Diet, not *heating* but very *diluting*, which may not encrease Viscidities; and when the Obstruction has continu'd for some Time, then it must be *sparing* and



*attenuating*; our Diet has the same Foundation of being chang'd, as our Medicines and Indications are surely to be strictly observ'd in the Administration of them; and if we were as nice in Diet, Affairs would often succeed much better than they do, and Cures would be more quickly accomplish'd: If Errors in Diet have sudden Effects in producing Diseases, they, by a Part of Reason, will have the same sometimes in the Cure of them; and we Experience every Day, how quickly Persons, subject to Colicks, are thrown into a Fit by eating a little unripe Fruit; or a *Seville* Orange; how suddenly they, who are afflicted with asthmatick Fits, are seiz'd with them upon eating a Meal of the Legumens, or drinking a Glass of Wine more than ordinary; how such as are liable to be Night-mar'd are, upon a full Meal at Supper, or upon a Meal of windy Diet, surely seiz'd with a Fit the Night. As these Instances are met with in Practice very frequently, they shew us what great Things are effected by Diet; and what we then be complain'd of, as too exact in observing the minutest Changes in Disease, and for adapting the Diet as they alter. 'Tis true, the great Difficulty consists in finding out these Changes; but then, who does not, is by no Means capacitated for Practice: In the main, in all Suppositions, Moderation is absolutely requir'd.

and according to the subsequent Circumstances, the *Regimen* is either to be *diluting* or *attenuating*; *diluting*, if the Motion or Qualities be *intended*; because thealts being put at Distance from each other, their Pungency is abated, and the Motion retarded; but *attenuating*, where the Blood has grown thick, as in length of time it does; I have already shew'd what effects these are, and therefore I shall supercede the Mention of them. But altho' this disease be often produc'd in this manner, as Authorities antient and modern do testify; \* yet they are not always produc'd so, for the Plenitude is often subsequent to the Grossness, that produces the Obstruction; that is, there must be some Grossness suppos'd to be lodg'd in the Womb, to obstruct, before the *Menses* are stopp'd; much less does this Account hold true in debaciated Persons, where the *Menses* never appear; there is no occasion for either Viscosity or a Plenitude in this Case; there is neither Blood nor Spirits enough to supply them; the Vessels are not stretch'd to such Pitch as to have their Mouths open'd; it is the Diet therefore to be *sparing* or *attenuating* here: On the contrary, there is surer Method of provoking them, than plentiful Feeding; when the Blood is

Vid. Schmitz. Jonston. River. Doleum, &c.

supply'd enough, then the Vessels open again at their usual Intervals; there is no need of Deobstruents either for Medicine or Diet; the original Cause being struck at the immediate yields without Irritants: 'Tis very easy to know the Cause of such a Suppression, if we reflect how little Damage such Women suffer by the Want of them; for indeed they will want them a Quarter or Half of the Year without the least Inconvenience: Besides this Cause, it often happens, that too great a Rarefaction is the first Occasion of a Suppression; for in the Supposition, the thinner Parts are carried off by the Pores or Kidneys, and the Blood becomes unequal in its Texture; some whereof is left thick and viscid, or sily: that Part which is rendered thus gross should circulate thro' the Womb, the smaller Vessels there may refuse it Passage, and obstruct the *Menses*: As such Persons are generally of a feverish Constitution, and subject to inflammatory Cases, the Diet must of necessity be diluting and gently aperient: the Particles of this Blood become cohesive and are therefore to be kept at a sufficient Distance from each other; and what is already fix'd in the Vessels, must be push'd forward and broken into minute Particles; therefore the watry and the chalybeate are proper Drink in such a Case; that is, chalybeate Waters of the lighter Kind answer

and I remember to have set by the Liquor  
 being from a Blister, which being forgot,  
 harden'd into a coriaceous Substance; and  
 having put the chalybeat Waters to it, it  
 immediately dissolv'd, and became very  
 smooth and saponaceous: I make no doubt  
 they will have the same Effect given in-  
 wardly. I forbear at present, to make men-  
 tion of many other Causes occasioning an  
 obstruction, some of which arise from the  
 state of the Fibres themselves, which are  
 often rendered too tense, from some exter-  
 nal Cause; In this Case a *softning* and *oily*  
 Diet is the most effectual and likely to suc-  
 ceed; Locals have a good Effect upon 'em, and  
 assisted by Internals of a like Nature, we  
 may depend upon a surer and quicker Relief.

In *Abortions* we must consider how va-  
 riously they are produc'd, to be able to  
 prescribe what sort of Diet is necessary to ad-  
 just such Women to; I shall at present con-  
 fine myself to two principal and most com-  
 mon Sources from whence Miscarriages  
 arise: In the first Place, a feverish Consti-  
 tution is apt to make Women miscarry;  
 indeed, we find many who are sub-  
 ject to have their Blood and Spirits put  
 into Hurries, liable to this Misfortune:  
 hysterical Women that are subject to Fits,  
 seldom are fruitful, for this Reason; Wo-  
 men who indulge themselves in the use of  
 strong



strong Liquors, do seldom go on, because they fill their Vessels too full, and shock the *Placenta* off from the Womb: Fevers, violent, produce a Flux of the *Menses*, and all know the Danger Women with Child and sick of a Fever, are under; inform us that we are forc'd to administer *Styptic* along with the Medicines proper for a Fever, to prevent a Miscarriage: In this Case, the Diet must be *diluting* and *emplastick*; *Dilution* is necessary for the Constitution, and *Emplasticks* for the Womb, and, as I have already shew'd what the Diet is, in the Paragraphs of *Fevers* and *Bleeding*, I shall wave it here. In the former Place, the Womb is too *lax*, and therefore is rendered unfit to bear any Load; as soon as the Child grows weighty, the Weight is greater than the Cohesion, and off it slips from the Womb, and they miscarry: Here the Diet must be *emplastick* also, but not *diluting*; their Fibres are already too much soak'd in Moisture, they seldom want the *Whites*, and all the Glands of the Womb become flabby, so that Dilution would but encrease the Danger: Generous Red-wines, which in the former Case would forward Labour and endanger Life, are absolutely necessary in this State; they warm the Blood, exhale the abounding Humour, carry it off by the Pores and Nerves, and gradually dry the Womb, which then

reby recovers its Tone, and becomes more elastick, and more able to bear its burden.

IN a *Rheumatism*, the Causes of it differ widely; for tho' the Pains in both Cases depend upon a Viscid which is too gross to pass the smaller Vessels, yet this *Viscid* is produc'd in different Manners, varies the Intentions of Cure, whether by Drugs, or Diet: In the Cold Rheumatism, where the Blood is not over-heated, the humors have been thicken'd either by Diet, or external Accidents; they have liv'd upon ripe Fruits; they have delighted in Pices; they have drunk small Cyders, or have expos'd themselves perhaps to cold and stormy Winds, and have thereby render'd their Juices gross and unactive, the Circulation is retarded, and the Serum or Lympha, being thus thicken'd, stops at every small Vessel, distends them, and creates Pain, which is more or less lasting, as the Juice is more or less thicken'd: The Diet in this Case should be warm and attenuating: By such a *Regimen* we re-dissolve the Coagulum, and the Pains will thereupon lessen, and at last cease. As it is observ'd, that these Pains are conquer'd by Spirits of Hartshorn, it leaves us assur'd, that the attenuating Diet will answer our End. But

on

on the other Hand, where these Pains attended with Heat and Fever, and produce a Swelling upon the Parts affected, the State of the Question is chang'd; Blood indeed is *viscid* and appears of Buff-colour upon the Cake; but then a sort of Viscidity would be heighten'd by Diet prescrib'd in the former; Attenuants would advance the Fever, and encrease the Pain by the Viscidity, and consequently the Patient as may be seen by such as are intemperate while they have Rheumatisms upon the Water-drinking, Ptisans, and cooling Diet is all we must rely on in these Rheumatisms; volatile Drops are too violent; for the Reason that Attenuants are hurtful: Dismiss them, and use Gruels, Panado's and like, we thereby prepare the Humours to be evacuated within fourteen Days: This is the common Term for such Blood to be digested and prepar'd to be carry'd off; for whoever attempts to administer Purgatives before that Season, raises the Pain, and would allay: The Water shews its Digestion by its permanent Sediment, and the Constitution is known by the sedate Pulse, and the decrease of Heat and Thirst: Now it is, Patients may venture upon more invigorating Diet, or however upon Diet which will gently promote Perspiration, and SWEATS; for the Humours are now prepared to pass off by any Outlet; and as SWEATS

al and useful, 'tis the Physician's Business to promote them ; which he may readily do by large Draughts of Sack-whey, by frequent drinking of Tea's made of Sage, Lemmary, Sassafras, Green or Bohea Tea, such-like ; the Liquor being small dilutes washes off the viscid from the obstructed Vessels, while its Warmth and fine Parts keep an equable Motion of the Fluids ; so that Vessels being kept full, those Humours are in a fair Train of being carried off of them ; and the Blood, having once freed with its morbidick Particles, becomes a just Consistence, and is stock'd with samick and nutritive Juices, so that it from thenceforward run on with Ease, and nourish as formerly. In either Case, *Viscid* requires Dilution ; but in the first, Liquors must be well sawc'd with Bit-Aromaticks, or Pungents ; whereas the latter, Dilution alone will serve the turn ; it separates the viscid Particles from the other, and envelopes the acrimonious in the Mass : In the former Case Bath-tubers are very proper for common Liquor ; in the latter, not only useless but dangerous.

*Ischurics* proceed also from various Causes, and when sticking in the Passages do often occasion a Stoppage in our Water. In such an emergency, Broths or Caudles, and all Diet

Diet whatever, should now be such as wash down and off this extraneous Body, and if also some forcing Drinks were used which would not inflame, the Affair would succeed so much the better; among these *Birch Wine* or *Liquor* is look'd on as the most efficacious, it dilutes and relaxes. But *Ischuria* don't always depend on this Cause: They are known to proceed from a Quantity of *Mucus* lodg'd in the Passages, and then a dull heavy Pain is felt on the Loins, never attends them, nor any Thirst: In this Case, the Pain is dull, because the Matter that is lodg'd is relaxing, and the Fibres stretch in every Dimension without Trouble: Fevers attend Inflammations only, the Part is not inflam'd, because the Fibres being soak'd in a soft Liquor makes them give way with Ease, and distend without inviting a Flux of Spirits to the Part; Thirst being an Effect of Humours being put in a Hurry, and exhaling the thin Parts, the Mouth becomes dry: 'Tis not easy, indeed, to distinguish when *Mucus* is the Occasion of a Suppression, but having observ'd it accompanied with the above-mentioned Symptoms, and having seen a Patient believ'd by a Mercurial Purgative, who made her void near a Pint of *Mucus* by the *Urethra*, before the Urine flow'd freely, is a Circumstance worth Remark, since I don't recollect to have read of such an



ce of Suppression any where ; and surely  
 his Case, the *Regimen* ought to be regu-  
 d by the Cause, which being a phleg-  
 ick State or an Obstruction, must be  
 ed with attenuating Meats and Drinks.  
 erefore Wines, hopp'd Liquors, Victuals  
 k'd up with aromattick Herbs, are the  
 per Diet to be insisted on ; these thin  
 Blood in the Vessels, and being separa-  
 into the Kidneys, do re-dissolve the jel-  
 Juices : It is surprizing how so much  
 tter could lodge in the Passages, but  
 bleless the Bladder also was fill'd up with  
 or so large a Quantity could not have been  
 ed ; the Original of which Flux might  
 some Obstruction of the Lympha into  
*Receptaculum Pecqueti* ; the Lympha-  
 s reaching from the Kidneys thither,  
 ng thus resisted in their Passage back  
 in, break into the *Pelvis*, and afford this  
 geal'd Stuff, for the common Secretion  
 rds nothing of this Nature : In this  
 position, which is not unreasonable,  
 le Stypticks should also be allow'd in  
 t, in order to close up the Breach. But  
 e Suppressions are not always thus oc-  
 on'd, for a Plenitude it self often intro-  
 es them ; the smaller Vessels are put  
 of a Condition of contracting them-  
 es, and therefore of pushing forward  
 Blood, so that the Heart sending Sup-  
 s every Second of a Minute to the Part,  
 these

these Twigs thus over-loaden, can't separate the Urine: The Load such People find in the Region of the Kidneys, and the Habit of Body they are under, give us a Suspicion of the Cause; all that can be effected by Diet is hardly sufficient to relieve; however, the attenuating Liquors or Meats must be forborn; Fasting, though too slow a Remedy, is commendable, for Nothing relieves like large Bleeding: I was once concern'd with a Lady under these Circumstances; no Diureticks of what kind she prov'd of Service, but Bleeding had an immediate Effect. But if a Palsy be the Occasion of this Symptom, then warm and aromatick Plants in Liquor and Meats are necessary to open the Nerves, and cure the relax'd State. So that here also we are constrain'd to change our Regimen, as the Cause varies.

ALTHO' the Diet in *Worms* should be of the same Nature, yet Circumstances make a great Difference; for it is certain that some Nourishment is very apt to produce them, or, to speak in more proper Terms, the animal Diet is most convenient for hatching them: Some Authors have advis'd against Milk, because, say they, Flies deposite their Eggs, which are hatched into Worms: But this would be acknowledging a Mistake less intelligible, than

ay Putrefaction was their Parent ; the Egg  
of a Flie never produces a Worm, nor *vice*  
*versâ*, but these are swallow'd in our Diet ;  
the Eggs of Earthworms produce Earth-  
worms, and if they are found within us,  
produc'd from raw Milk, they must have  
been swallow'd by the Creature that afford-  
ed the Milk, how hard soever this is to be  
credited ; since no Generation is equivocal.  
There is doubtless some Food those Reptiles  
delight in more than other ; and we find,  
that they are found to lodge their Young  
where they feed oftneft, that is, in all  
*sweets* ; so that *Figs* are one of the worst  
fruits Children can feed on, and are there-  
fore forbid by all : 'Tis a well known Arti-  
fice with Physicians, to administer tasteless  
specificks against Worms wrapt up in  
sweets, and so they swallow the Bait and  
hook together ; Sugars also are bad in the  
Diet of Children, not upon its own Ac-  
count, but because the Eggs of Worms and  
other Animals are dropt into them : The  
Symptoms of Worms are many, and are  
serv'd to proceed either from a *Consump-*  
*tion* of the Nourishment of the Patients,  
or from an *Irritation* rais'd by their *Pro-*  
*scides* or *Snouts* ; as will appear by taking  
view of their Effects. Wherefore the Pains  
in the Belly, the Gnashing their Teeth, the  
itching of their Noses, their *Diarrhea's*,  
and Convulsions, do all arise from the

P

Worms

Worms twitching the Guts, and putting the Nerves into Contractions; whereas the Faintings and Atrophy's are from the Want of Nourishment. The Diet People trouble with *them* should insist on, or rather the Sawce for that Diet, ought to be such as Experience informs us, will expel them; they ill bear any thing but Sweets, and therefore we ought so to season the Chyle as to render it disagreeable to them, yet not so much as to disturb them too eminently; for then they raise great Tumults in the Bowels, which very often throw poor Infants into Convulsions; we find by Experience, that *Oil* is an Enemy to them, and that being put into it, they grow languid and die; their *Perspiracula* along the Spine are bung'd up by it. *Salt* and *fat Meats* are found of Use, for as they avoid any pungent Diet, so they are hurt by it; and yet it is surprizing how these Creatures breed in salt Water in the *Indies*, as appears by the Damage they do to our Shipping. Red Wine is an Enemy to these Creatures, which seems to be owing to its Stypticity; it appears by Experiment, they die soon in Claret: Heat is also found to be an Enemy to them; for if they are expos'd to a little Warmth more than usual, they expire and shrivel. We see by every Day's Experience how Worms are voided dead in Fevers, the Heat of the Body being much encreas'd above

above the natural, so as to parch the Intestines, and the Mucus they are lodg'd in, kills them; Aromatics, Pungents, and Bitters having their Share in Diet, are of Advantage in *Worms*: But notwithstanding we are well skill'd in Vermifuges, sometimes it happens, that we must be careful in their Administration, because at a Time when the Blood is overheated in a Fever, and they are disturb'd thereby, I have seen and observ'd, that the giving of Drugs eminently efficacious, has at that Time prov'd fatal; and if Drugs, by an equal Consequence, Diet which is too quick and strong for them, may be of ill Consequence.

In the *Gonorrhœa* and *Venereal Disease*, the Signs are numerous, and spring from an apparent Acrimony in the Juices; the Pains, the Ulcers, the rotten Bones, the Bubo's, the Shankers, and the *Ghorreæ's*, are all Arguments of a Sharpness of Humours; and as this Acrimony is of the Nature of *Aqua Fortis*, it ought to be attended by Diet, which has a *Smoothness* to it; neither can I see why a warm attenuating Regimen should be forbid, as I had some Physicians advise; for who is afraid of Medicines which have Heat in them: For Example, *Guaiacum* and *Sassafras* are both recommended in all their Descriptions, whilst they banish Aromatics



icks and Pungents from the Table; but is not Sassafras hot, biting and scented? and is not *Guaiacum* also biting? They are known to contain volatile Salts in them, which are also *oleous*; and it is for this very Reason they are useful in the Pox. For the Smooth and oleous Parts serve to sheath the prevailing Acid in the Humours, whilst the volatile Salts are accounted diametrically opposite to the Acrimony; wherefore it is a Mistake always to forbid either Aromatics, Pungents or Bitters in the Liquors of pox'd People; indeed Salt and salted Meats, or eager Diet, as Pickles, and the like, ought to be banish'd, because they add to the Acidity of our Juices and encrease the Malignity of the Humours; and therefore they are always prejudicial: And sometimes Circumstances require, that we shou'd avoid these Pungents; for if pocky Persons be of a hectical Constitution, the smooth Regimen of Ivory, Hartshorn, China and Sarsaparilla are only allow'd in Jellies, Broths or Drinks, and a plain Diet of Rabbits, Veal and Chickens, which have a Smoothness in the Nourishment; if we administer the Sour or Salts in Victuals, we add to the original Disease and the Symptoms also; but the Pungents encrease the Symptoms, and waste us by forcing Sweats, Urine and Stools; which the Patient is in no Condition

bea

bear: Our Business is to nourish and alter the State of Blood at once, but by giving the Patients warm Things, we do not nourish, but subtract; and the Patient wou'd be spent and wou'd die before his Blood were rectified: Moreover, this Pungent Diet is also with Reason forbid in Case of Ulcers, because there is no healing them, without sheathing their Acrimony; and this Sort of Diet, by contesting with the malignant Juices, would raise too great a Struggle, would inflame them and hinder their healing up: When a Swelling appears any where outwardly; and becomes inflam'd, the Inflammation should be forwarded by a generous Diet; this Contrivance drives out the Malignity to the Part affected, and makes it impostumate, so that much of it is carried off; if the Abscess be large, and discharges plentifully, the Disease is lessen'd if not cur'd; I reckon a *Scurvy*, succeeding a Pox, lessen'd by a critical Abscess, to be the Case of many an old *Sire* complaining of Pains in his Bones, and which is easiest cur'd by *Antisphylicks*; but, to say the Truth, few are cur'd of Poxes by Abscesses, there will be some Relicks, which deserve the Physicians utmost Care to eradicate, and they who neglect this Diligence will find, for the most Part, Reason to repent them. We meet daily with Pains, conceal'd under

der the genteel Name of rheumatick or scorbutick Pains, which are Offsprings of this Root, and the Physician needs not put a Patient to the Blush, nor mistake his Aim, if he blends Antivenereals; they don't prejudice the rheumatick Blood, but they certainly amend the pocky Humours; nay, Mercurials attenuate any Viscid whatever, as may be seen by an easy Experiment, namely, by putting Serum into a small Tube, and by Heat, or acid Spirits thickening it; to the Liquor thus thickened, pour in Quicksilver and toss them together, the Serum will recover its usual Liquidity, and flow backwards and forwards in the Tube, as before.

HAVING descended to the Particulars of Diet proper in most Diseases, give me leave to draw a few useful Cautions from thence which follow necessarily from the Premises. Whoever attends the Sick or advises the Healthy, must reflect with himself how difficult a Task it is to prescribe Diet proper for every Individual; *Custodia* is a Tyrant in Diet, which makes those Victuals agreeable, a reasonable Person would never advise them to eat; how fare it with the Turks with their belov'd *Opium*? How do weak Stomachs bear strong Meats they have been accustomed to, which vigorous Men will not venture upon

upon? The Stomachs of some People are as much fashion'd to digest strong Meats, as the Shoulders of Porters are fitted, by Use, to bear heavy Loads; nice and delicate People shun giving their Stomachs much Trouble, but the voracious have us'd them to any Meats indifferently; so soon as Men recover out of an Illness, they crave the Victuals they have long us'd; the Stomach returning to its natural Tone, and the Ferment being the same as in Health; they long for that Food, they, by Custom, have made natural to them: There is then in Custom some Harmony contracted between some Meats and Stomachs, that causes Persons us'd to them or liking them, to long after them; the strong Victuals some tender People eat with Pleasure and digest very well, would make Men of thrice their Strength puke up all within them: It must be then that the Stomach being accusom'd to bear the Load of heavy and dense Victuals, becomes more tense and elastick thereby, than theirs not us'd to them. Here a Physician not us'd to the Patient may be easily mistaken, having no Warning of the Strength of this Organ in this Individual; and for this Reason it is, that it is agreed on by all, that before we order any Diet, we ought to enquire into the customary Victuals of the Patients, and

favour their Desires as much as the Nature of the Disease will allow ; and indeed when their Appetites are pall'd with every Thing, that is judg'd proper for their Condition ; but yet craves greedily and longs much after a very improper Repast for it, we are indispensibly oblig'd to follow this deprav'd Appetite, or suffer them to starve, and the meanest Physician is well acquainted that Conservation is the first and main Intention ; so that in this Case we act as we do in Contra-Indications ; that is, we relieve the most pressing Symptom, otherwise Life lies at Stake. If we except this Custom, our Business is to consider the Subjects we intend to nourish whether it be to preserve it in Health or to restore it from a Disposition to a Disease, or from an actual Distemper, and to reflect on the Nature of the Diet ; *if they are in Health*, our Business is to continue it by regulating the Quantity and the Quality of the Victuals, and the Seasons of their Repasts. They are in Health whose Functions are well perform'd, and who have no Complaints to make ; there is a just Proportion of Principles in the Juices, the watry Parts are not so plentiful as to drown the active Principles and hinder that Struggle, which gives Being to the Circulation and all our Secretions nor so sparing as to suffer our Oils and



*Sickness and Health, &c.* 217

to approach too near to each other, and scorch us up, and destroy us with Fe-  
of any Sort; this is that *Temperament*  
the Ancients term'd *the moist and*  
where the Moisture dilutes but does not  
quish the Heat; where it serves as  
er to *Phosphorus*, which without it  
d flame and consume all around; where  
Heat rarefies the humid Parts and keeps  
moving all Ways, and makes them  
pass any Strainers, where it serves to  
w off its Superfluities thro' the Pores  
Kidneys, and to perpetuate all our  
tions; this is the Standard we mea-  
all Deviations by: How far we wan-  
from this State, in which our Pulse  
regularly, our Respiration is free, our  
tite is sufficiently keen, our Digestion  
perform'd without *Ructus*, Inflations,  
vineffes or Fluxes, our Urine is of a true  
n Colour with a concocted Sediment,  
Heat is not scorching nor yet are we  
y, so far we incline to a valetudinary one  
iseases.

Quantity of Diet for the Sound, is best  
ar'd by their own Experience, which  
inform them not to eat all they can:  
und Stomach craves more than it can  
t, and we conclude, with Reason, that  
have exceeded in our Meal, if we feel  
Load and Belchings; Nice Cookery is a  
dan-

dangerous Bait, it catches the most Amorous, and all Rules are laid aside for a delicious Morsel ; the Source of many Diseases is laid in the Stomach, we exceed in Quantity and in Quality too; and if none can dissuade us from the Snare, at least let us follow the Wise-man's Advice, *Plus viuis sis in epulis, surge & medio & cibus sic non adduces Corpori tuo infirmitatem*. We have seen already how many Diseases spring from Excess in Diet, and nothing but Sobriety, Abstinence, Moderation, Night Sweats, spontaneous Fluxes of undigested Matter, or gentle Vomiting, can prevent such Persons falling into Diseases; frequent vomiting and gentle Stools clear the Gut of its Load; the Vessels of the superfluous sweating, the Vessels of the superfluous Load; so that by the first, Colicks and Windings are prevented, and by the latter, Rickets and Defluxions.

NEXT to the Quantity, we ought to be careful to chuse such Diet as will give us Chyle no sour, no acerb, no austere, no stinking, no bitter, or no acrimonious Taste, but it ought to be midling in its Qualities; it should be temperate, firm, well fermented, sweetish, juicy, soft, and light; whether the Meal consists of one or many Dishes, it ought to be so contrived as, when dissolv'd, to afford Chyle approaching near to Milk in all its good Qualities.

efore it cannot happen, that the Oppu-  
should long continue in Health, their  
s are so manag'd as to abound in high  
ns, or even Ice it self; they over-heat  
inter, and over-chill in Summer; and  
g no Knowledge of the Nature of the  
erials they feed upon, or of the Mo-  
of the Fluids, they neither know what  
prejudic'd them, nor what ails them;  
ot so easy as may be imagin'd, to guess  
Diet swallow'd down and diges-  
will make a sweetish Chyle: Well  
Patients be at a stand on this Point,  
we see Physicians themselves dispu-  
the Case; one discommends Pork, as  
hard of Digestion, perhaps, because he  
ed up with a Prejudice to it; or, because  
Soil where he was born is ill Food for  
Creature; or, because some prevailing  
se, for which it is incommodious, reigns  
e Country he was born in; whereas,  
s having fine Conveniencies for feed-  
hem clean, being us'd to it from their  
cy, and delighting in a luscious Meal,  
mend it as the wholesomest of Foods:  
to say the Truth, where a Man has  
version to this sort of Food, I can see  
reason to decry it, with Dr. *Cheyne*, as  
of Digestion. Are the Fibres of Pork  
? Is not its Juice sweet and luscious?  
therefore easily divided, and its sweet  
is readily extracted, and it affords good  
Nourish-

Nourishment ; however, it must be ob-  
 some People can't bear it, by reason of  
 luscious Taste ; it is apt, by that Quality  
 ferment in the Stomach ; but then we  
 reflect on the Idiosyncrasy of such Per-  
 or, perhaps they are of a Hypochondriacal  
 Constitution. I know *Sanctorius* put  
 in the Rank of Mushrooms, and says,  
*the use of Swines-flesh and Mushrooms*  
*bad, both because these don't perspire,*  
*because they hinder other Victuals also*  
*perspire :* And, upon the use of *Swine's*  
*flesh and Mushrooms, the Body perspires*  
*for the most part, less by one Third.*  
 it plainly follows, that Bodies which  
 spire too much, may bear Pork : But  
 Examination we find, that all Persons of  
 verish Constitutions perspire too much,  
 then the Consequence will be, that the  
 sickly will bear the Diet. This is  
 more than I contend for ; but it must  
 tainly be allow'd a Nourishment, at all  
 ventures, proper for such as exercise  
 and therefore in *Spain* and *Italy*,  
 their *Siesta's* or Heats, oblige them  
 still or sleep, it may not be so proper  
 as in *England*, where we exercise  
 and can digest, and do require that  
 which won't fly off too soon ; but  
 in those warmer Climates a certain  
 degree of Perspiration is requir'd, and  
 being unwilling to break up a Custom

make use of Exercise to comminute  
 Fluids, and so fit them for Perspira-  
 ; and therefore do they content them-  
 s with a Diet suitable to their Custom :  
 People of *England* are an active, stir-  
 People, and can easily digest, nay, and  
 require, as I have already said, such  
 uals, tho' by its Food it should be viscous.  
 ve become Valetudinarians, either our  
 d exceeds in Heat or Chillness : If our  
 stitution be too warm, and our *Appe-*  
*crave* this sort of Food, the Warmth  
 digest it : If we are too chilly, Exer-  
 will be necessary, and then it need not  
 enied them, if they *earnestly crave* it.  
 or my own Part, 'tis not Inclination  
 makes me an Advocate for this Sort of  
 , only when Men, without any Foun-  
 n, run too great Lengths in their De-  
 s, 'tis not Reason, but Humour that  
 es them : Hear *Jonston* on this Head ;  
*illa pro ratione ætatis variat, Δελφικῶν*  
*Lactentium* est humidior, Succi mi-  
 ne boni — — *Adolescentum* est melior  
 bene nutrit, — *Juvenum* cæteris præ-  
 t, potentissime nutrit & firmum alimen-  
 m præbet ; hominibus ætate florentibus  
 qui magnis laboribus exercentur, com-  
 diffima. *Decrepitorum* qui χοῖροι, est  
 ra, insipida, melancholicorum morbo-  
 m parens, vino diluenda. *Aprugna*, tum  
 od nec ita excrementitia sit, *neque vis-*  
 "cosum"



“*cosum succum progeneret, domestica pro-*  
 “*tior est.*” Swines-flesh varies according  
 its Age; a Sucking-Pig is too moist, its  
 is not wholesome, very young Swines-  
 is better, it *nourishes well*: Middle-aged  
*best of all*, it *nourishes powerfully*, and  
 affords *firm Food*, very convenient for  
 and such as use *hard Labour*. The  
 hard, insipid, and breeds melancholick  
 humours, and is to be diluted with Wine.  
 The Wild Swines-flesh is better than the  
 because it does not afford such *viscous Juices*.  
 And thus it fares with all Food, if they  
 too flabby, or too hard, they are repulsive  
 too phlegmatick, or too dry; neither  
 which Conditions are proper for the Body  
 they; but when Age has brought them  
 comes to a good Consistence and Perfection  
 and made them smooth and juicy,  
 Nourishment is more or less balsamick,  
 approaches to, or deviates from these Con-  
 ditions. It is affirm'd by some, that twelve  
 Ounces of Blood, contain eleven Ounces  
 Water: Be that how it may, 'tis our Bu-  
 siness to maintain a certain Proportion  
 Principles in our Juices; if we exceed  
 Measure, we gradually dwindle into  
 cases: But if the saline, the sulphureous  
 the earthy are only  $\frac{1}{12}$  of the Whole,  
 then our Business to avoid Meats too  
 too fat, too dry or too watry. Wherefore a  
 consisting of any one of these, must be of

mighty, and incline us to some Distem-  
The Drinks made use of to dissolve  
mix with our Viſuals, ſhould be part-  
ratory, and partly oily, for all Diſſolvents  
be homogeneous with the Body to be  
olv'd, and our Diet being ſaline and ole-  
requires ſuch Liquors, as are aqueous  
oleous : Element alone would not al-  
s answer our End, for then the oily  
s would ſwim above, or ſubſide ; nor  
upon this Footing, the oleous ever ſo  
ly rarefied, ſerve the Turn in all Emer-  
ies, for if we have ſurſeited upon a  
too viſcous and glutinous, Brandy can  
twitch the Stomach, and ſend it down,  
not diſſolve or diſteſt it : Here we  
make uſe of *Tea* or *Coffee*, or ſome  
Ingredients in warm Water, to enter  
and comminute the Diet, and render  
ore Fluid, that it may circulate freely,  
paſs thro' the minuteſt Canals of our  
, and afford good Nouriſhment : For  
of ſuch a Caution, we ſhould preſent-  
our under invincible Obſtructions, and  
eir Conſequences, which are too nu-  
us to be inſerted in theſe Sheets.

all the Inſtances of Life, too *homoge-*  
a Diet is the certain Parent of Diſ-  
we muſt ſupply our Stomachs with  
duly proportion'd in Principles, and  
is known to agree with the Perſon  
that

that takes it. Nourishment of all Oil, Salt, all Water, or all Earth, is nauseous; the Chyle, and Blood, and Secretions would then necessarily fail: No Oil, less Salt, and least Earth, must be added with a good deal of Water, and due Fermentation will be maintain'd. *Boerhaave* somewhere affirms, that  $\frac{1}{3}$  of an acid Salt is sufficient to keep up a fermentation with the other Salt or Oil in the Elements with, and it appears by *Analysis* *Vienssens*, that in 50 lb. of Blood there is not above half an Ounce of an acid Salt to be got, and our *Transactions* observe that Part of this also was owing to the Acid it was distill'd with; from whence it is plain, that the Acid is not above a third Part of the Whole, if so much. In the Body if this mention'd Proportion be not serv'd, there is no Concoction, no Digestion, no Circulation, no Secretions, and Life can be continued long. All weathers rarefies and expands within us; Oils expand in the same Time, double to strong Air, and these double to Water or weak Air, so that what *Hippocrates* said of old, *Olea, ex modica mole, multum distillantur*, proves true; Liquors, the more cohesive they are, boile and rarefy the more, because they retain more of the Particles, whereas the less cohesive they are, the more readily does the Fire pass thro

them and exhales. Now cohesive Fluids are unfit for Digestion, and the less we take of them the better; but yet a little of them is necessary to preserve the Consistence, and indeed without those Oils and Acids there could be no Heat nor Digestion. Well therefore may we blame Persons feeding on oily and fat Nourishment, since it is impracticable for us to swallow so much of Acids, as will boil with them and digest them: So that I have often been amaz'd to see how readily some Persons swallow the rankest fat Victuals; it must surely pass downwards, or do hurt: *Oil*, therefore, fat Meats, Butter, Olives, Nutts of all Kinds, should be sparingly fed upon. *Sours* are a dangerous Diet also to insist on; Vinegar, Lemons, Oranges, Pomegranates, and such like, if used immoderately, coagulate the parts of the Blood, and render it vastly sticky and glewy; Brandy helps to digest or dissolve an immoderate Meal of Fats, being homogeneous to them, and also blunts the effects of Acids, as appears in making rectified Spirits of Nitre; so that if we have indulged in either, a Dram is not amiss; and we observe that they whose Stomachs are clogged with Hageness, pass their Time ill without a Dram in Moderation: When Acids abound too much in the Stomach, they either give a voracious Appetite, or cause cramping Pains; but in either Case, Brandy

is good: *Dekkers*, whatever *Waldschmidt* says to the contrary, is in the right to commend *Spirits of Wine*, and *Aqua Vite*, the Dog-Appetite, because, as I have hinted above, it dulcifies the Sour. *Oils* therefore whether crude or rarefied, and Acids, whether raw or concentrated, *alone*, are nauseous for human Bodies; but when they are blended by Nature or Art into a Sweet, near to it, and are afterwards judiciously diluted with a sufficient Quantity of Water so as to be fluid enough, there is so much Cohesion in the Mixture as is requisite, no more; they will by several Circulations and further Digestion be fitted to take Food and ferment in our Blood, and keep up the Heat which is agreeable, and frame the Composition which is specifick to our Natures. The same Mechanism holds in Plants: they suck from the Earth into their Roots oily, earthy, and acid Particles, they are watred from Heaven at due Seasons, the Juices are blended and circulate in proper Tubes, the Heat of the Sun gives Life to this Digestion, and they are exalted into a specifick Juice. A judicious Mixture, therefore, of Oils, Acids, Earth, and Water, which become moderately sweet, are agreeable to our Nature; our Blood is not worse but better for containing a *Phosphorus* in it, and yet *Phosphorus* is very caustic. It appears by *Baldwin's Phosphorus*,



Chalk contains an Oil, as may be guess'd at by its Smoothness and Smell, and making salts crystallize sooner, as Spirit of Wine does, which by the concentrated acid Spirit, and the Help of Fire, unites into a luminous Lustick: *Phosphorus*, therefore, is pure Oil and Acid united, which, expos'd, ferment into Flame, and which, diluted in our Blood, keep up our moderate Heat and Fermentation, and is the Original of Life in our Juices, and in Plants also. What Injury can *Punch*, truly made and moderately taken, and drank in proper Constitutions, though valetudinary, do to Mortals? It revives Spirits, keeps up our Fermentation, increases our Heat, promotes Perspiration, gives an Edge to our Appetite, provokes Urine, keeps our Bodies open, and refreshes the drooping; in short, I advise the Healthy to drink it in Moderation to keep up their Spirits, and let Valetudinarians of a cold, Slegmatick, and watry Constitution, drink as much as will agree with them; but at the same Time I advise, by all Means, the bilious, the hot and hectic, to forbear it; when we hear it superlatively commended and glorify'd by Physicians for every Constitution, sound or valetudinary, 'tis either a Delusion, a Banter, or Ignorance.

It requires a deep Skill in the *Materia Medica*, to determine on the prevailing Prin-

ciples of every Diet; and without this Knowledge, we dispraise and commend out of Tune. Besides, when we know our *Meat*, we are yet to know our *Man*; and we must fit *this Diet* to *this Individual*. *Custom*, *Idiosyncrasy*, and *Reason* rule in Commission, they make but one Monarch; Reason is youngest, and gives Custom or Idiosyncrasy the Honour of the casting Vote; 'tis too dead a Weight for Reason to contest with: But where this Custom or Idiosyncrasy have not taken place, Reason steps in, and gives Laws.

So that a Physician, before he prescribe any Diet proper for his Patient's Condition, says, Have you been us'd to this Diet, which is so disagreeable to your Disease? Or, This Diet is proper for your Circumstances, but have you no Aversion to it? According to their Answer we must proceed: For, if a Diet improper for them has been a customary Meal, tho' hard to be digested by others, and if it is much coveted, we may grant them some Liberty on this Head; and if a Diet very proper for their Condition be ordered, but was observ'd never to agree with them, it must be forbid.

FROM which Principles we must conclude, that in *Health* Diet must maintain that Symmetry in their Juices which the

Nature is accustom'd to; and in *Sickness* we are to give a Diet directly opposite to their Disorder, so far as Custom or their peculiar Nature will allow. I have descended to such Particulars in this Diet as did lie in my way, leaving the Remainder in part to be cull'd out of my *Euodia*, but more fully out of other Writers on the *Materia medica*.



Q 3

CHAP.

## C H A P. III.

*Of Motion and Rest.*

**E**XERCISE has a great share in introducing or staving off Diseases by it our Juices are press'd into the minutest Channels; we move by the Assistance of our Muscles, they upon Motion change their Figures, as do the Vessels stretching themselves along them and also among their Fibres; as the Muscles swell, the Vessels are squeez'd and emptied, and as those sink, these fill again. Exercise then causes a *Systole* and *Diastole* in the Veins, Arteries, and Lymphatics; that is, it sends the Blood forward, and continues a Circulation: therefore of great Importance to know how to regulate the Sound or Sick's Exercise; by this we are inform'd of the Standard of their specifick Habit: That Degree of Motion, which is perform'd without leaving a Lethargy behind it, is agreeable to the Constitution of the Person moving or mov'd; for

the Expression can be allow'd of, there is a *passive Motion*, which of all others is the most suitable to Nature: By such a Motion the Juices are urg'd forwards without the Experience of Spirits ensuing upon the *Active*; riding on Horse-back, or in a Chaise, as also *Swinging*, is properly such a Motion; where the Degrees of Shocks given to our Blood hurry it proportionably onwards: But yet, the Action not depending on us, the Blood is mov'd without the Spirits being exhausted. These Exercises are best fitted for the Valetudinarians, who want them, yet dare not run a higher Hazard. Exercise has a Power of strengthening the Limbs, as may in part be seen, by examining the various Professions and Trades; the Shoulders of a Porter, the Legs of a Runner, the Lungs of a Singer, and the Arms of a Waterman, are generally stronger than others, because they have habitually us'd them for Years; and the constant and plentiful Influx of the Blood and Spirits into them, makes them more readily admit these supplies; so that the Channels of both the Vessels and Muscles are become larger and more elastick, and consequently stronger: And that Exercise therefore which is the most universal, will of course be the most preferable for making us strong: And, as before, I took Notice of the Strength of some Stomachs, which would digest strong-



er Meats than their Constitution could seemingly bear, so I hinted there at the Reason of it, which is a Habit gradually contracted by Use; yet Exercise is never to be attempted where the Solids are highly injur'd, or when they are past Repair; for what can we then expect but Breaches of the Vessels, and other dismal Consequences. In general, where the Blood is viscous, and the Fibres are *relaxed only*, Exercise is conducive to attenuate it, and to re-brace them; but if they are broken, distorted, or compressed, if they adhere, or coalesce; if they be inflam'd or ulcerated; if they have chang'd their Connexion, or are become too hard and rigid, or too small, what has Exercise to do with such Cases? And how plain is it that Persons become asthmatick from these Causes? A Lymphatick, for Example, breaks into the Cavity, and continually ouzing into it, the Lungs can't expand, and Exercise only forces them to breathe short, and makes the Breach to enlarge faster, and does harm. Suppose a Polypus in the Vessels, Exercise, by hastning the Blood's Motion forwards, endangers a Rupture of a Vessel: If the Lungs adhere strictly to the Pleura, Exercise gives Pain, but no Relief: If any Number of Vesicles become stopp'd up, or grow together, what Force is Exercise? It hurries the Blood's Motion on, and some Vessels being

imp

affable, others suffer the Load, and then  
 takes them breathe shorter, without con-  
 ducting any Advantage. All the World  
 w<sup>o</sup> Exercise neither agrees, with In-  
 flammations or Ulcers. If the Vessels are  
 permanently inflated, and Dr. *Tyson* relates  
 a Case, or are become too rigid, Exer-  
 cise endangers a Breach of Vessels, because  
 excessive Swelling of the pervious ones,  
 too hasty a Motion of the Fluids thro'  
 cracks them; and how many Ways  
 Asthma's be caus'd secondarily, where  
 cure can't be attempted, is manifest and  
 obvious enough to all the Faculty? Can an  
 Asma from an Ascites, from a Scirrhus of  
 Liver, from a Straitness of the Chest,  
 be reliev'd by Exercise? So that for Dr.  
 to give so positive and general Di-  
 rections for Asthmatics to use Exercise,  
 is greater Odds than Forty to one,  
 Patients would be ruin'd by the Advice,  
 which shews a great Inadvertency in the  
 Author. And *Lommius* \* upon *Celsus*,  
 that a quick Walking threatens the  
 Rupture of some great Vessel, and loud Speak-  
 ing fatigues the Lungs.

*celer cursus grandis alienius vasis disruptionem mina-  
 voces alta pulmonum totius thoragis negotium facessunt.*

THE

THE Advantages we reap by Exercise numerous; Life itself consists in the circular and intestine Motions of our Fluids, their uninterrupted Passage thro' Channels truly fram'd; and *Death* is a Cessation of the circular Motion thro' them, to which is added a putrefactive Fermentation: *Diseases* then are Faults in the Qualities, Quantities, or Motions of our Fluids and Solids, tending to destroy the regular and Symmetry of these Fluids and Solids. When the Juices are apt to move heavily forward or to grow too gross, by some Misapplication of our Non-naturals, Exercise is a *Succedaneum* for Medicines that exaggerate the Juices; and *Vice versa*, where the Blood moves too fast, and the Juices are too thin, Rest contributes its Share to retard the Circulation, and to thicken the Blood. When the Circulation, as Affairs stand, is equal to the whole *Oeconomy* is regular, our Secretions are thrown off in due Time and Quantity, and we are in perfect Ease: Motion makes the Blood visit the most extensive Parts, and Steams are thrown out by Pores in a proper Quantity: Nay, if Pores happen to be obstructed by unwise exposing our selves to the cold of Winter Seasons, Exercise with due Cautions will restore this Secretion, and prevent Diseases which are many, arising from this Obstruction.

HOWEVER, Exercise must be exactly proportion'd to the Constitutions of the Persons using it, if they design to preserve Health : If Exercise be moderately us'd, it promotes Perspiration, and sets all our Juices in Action, it will follow, that the Quantity of them will be kept up by immoderate Exercise, and they will be apt to become sharp, acrimonious, or viscid ; as also the Hurry will be too great for the Vessels ; and then Fevers, Hecticks, and the Train of warm Diseases will ensue ; where the more watry Parts steam off in Vapours, the various Salts are left in our Blood, which frame Bile, volatile, Salso-acid, and other Salts, as the Mixture is at that time constituted within, and which introduce Diseases suitable to the known Nature of the prevailing Humour : And, if on the other Hand, we lead an unactive or sedentary Life, we must expect a phlegmatick, watrish Blood, and must necessarily fall into Diseases of a cold Nature.

The Reason why Exercise is not to be immediately upon a Meal, is, because at that time Nature is employ'd upon Digestion ; for the Work of Concoction requires a Ferment in the Stomach, and an influx of Blood and Spirits into the abdominal Muscles, the Vessels and the Nerves, to make that Organ compress the Viscera more vigorously ; but Exercise at that Season



Season would determine the Blood and Spirits into Tracts suitable to the Nature of and would call off a great Share of both to the Parts moving, whereupon the Stomach and Muscles would be depriv'd of their Quantity, and would thereby become less and unapt to comminute our Victuals, that they would pass thro' the *Pylorus* undigested; that is, with their Juices wrapped up in their Fibres; and as they are not extracted, so they can't be chang'd, but would pass down to the *Anus*, and be thrown out. If such Juices chance to be extricated at the Mouths of the Lacteals, and are suck'd in among the rest which are already attenuated, 'tis easy to guess what a Mixture it will make in the Mass of Blood, namely, a *rudis indigestaque moles*, a sour, gross undigested Liquor, and then it serves to the bad Purposes of corrupting the whole Mass of spoiling the Secretions; and particularly the cortical Part of the Brain, being a Passage for æthereal Matter, will not separate the Spirits. If there be no Extraction of the Tincture, the Meat descends, and is thrown out very little chang'd, and gives us the Disease call'd a *Cæliac Passion*. From these Considerations it appears, that upon Exercise after Meals, either the Victuals are hurried out of the Stomach too precipitately, or are left there undigested: From which Mistakes, we are either depriv'd of Nourishment



ment, and dwindle into Atrophies, or  
 infested with Wind, Inflammations, Sickness,  
 chings, and Loads at Stomach; for  
 ch Reason, there is a Call for Drains,  
 end the Contents down into the Guts.  
 e fittest Season then for Exercise, is  
 a Meal has been thoroughly distribu-  
 into the Vessels, for at that time it is in  
 Course of Circulation, and by Motion,  
 gross Parts are divided into minute Cor-  
 ecles, and fitted to pass all the Secretions:  
*Florius* thinks seven or twelve Hours af-  
 Victuals to be the best time; but then  
 tells us, in the foregoing *Aphorism*,  
 large Exercise before Meals is prejudi-  
 cial; and then this Question might be started,  
 wit, When is the properest time for such  
 at thrice a Day to use Exercise? That  
 Exercise requir'd to let a Breakfast off, would  
 come in play till the next Meal were  
 pleated, and we should be oblig'd upon  
 a Supposition, seldom or never to stir:  
 were it so slow as *Dr. Cheyne* would  
 e it, \* and this Rule were to hold good,  
 Exercise would never be in Use: Methinks  
 Experiment is hardly sufficient to de-  
 termine on the Progress of the Remains of  
 Victuals to the *Ans*, or I might, with  
 some Justice, conclude, that twelve  
 Days

Days time is requir'd, having known a Penknife to have been swallow'd and liver'd in that Space : However, as I'm not much in Jest as the Doctor seems to be, we not observe, that the *Feces* of such drink Red-wine, are Black next Morning; do they not render the Topers of it cold in that Space? Do we not Experience Consequence in Fluxes every Day? So few Cups of Red-wine burnt and drunk down, will often, in six Hours, stop Flux, and dye the Stools Black in less than six more : A Draught of Steel-wine has ten surpriz'd the Patient in less than two Hours, and fill'd their Heads with odd notions of some strange Change in their Constitutions, from the dirty Hue it gives their Stools ; besides, the Constitution one Person differs widely from that of another ; all Digestions are not completed the same Space ; and moreover, the Experiment would not answer a second Time in the same Individual, or the second might meet with Damns at the first time, which it might escape on a second Trial ; a little more Liquor, or a little more Exercise, would have driven it sooner at the above-nam'd Door. But to return to the Question ; I believe three Hours after Meals, generally speaking, are a proper Time to Exercise, because I have frequently taken Notice, that upon Bleeding in

In that Space after Dinner, the Chyle has  
always been observ'd swimming plentifully  
in the Serum; so that in or near that Space  
Motion would contribute to thin this Chyle,  
and send it round the Body into all the  
super Strainers.

WE are to observe the Nature of the  
Exercise and the Strength of the Mover:  
Long Exercise for the weak is an Incon-  
sistence, and weak for the strong is insuffi-  
cient. Moreover, a small Meal requires  
proportionable Exercise, and it fares well  
with us, if a long Tennis-match will take  
too full a Dinner and Supper: Sweats,  
such a Supposition, are of use, and *Hippocrates*  
long ago found, that Night-Sweats  
take off the bad Effects of too full a Meal,  
and all Evacuations are the Remedies of Re-  
pletion, and Art is oblig'd to follow Na-  
ture's Footsteps: But she, in such a Case,  
throws off the offending Quantity by the  
Pores, and therefore it is lawful for us to  
assist her, and by Exercise to promote  
Respiration, and even Sweats, if need be;  
it would require a long Time for too full  
Meals to exhale in Steams, which is soon  
done by Sweats: It would, however, be  
judicial to Nature to feed much, because  
we find an easy Remedy for it; for, tho'  
Artifice will carry it off, yet if we ac-  
ustom our selves to this Evacuation fre-  
quently

quently, the Pores will become flaccid thereby, and we will be liable to Colds continually; because the more our Pores are, the more they separate, the greater will be the Retention of Cold, so that by frequent Openings and Shuttings we shall put Nature upon a Rack of Extremes: A Vomit is an Evacuation which cuts off the Effects of a Meal in an Instant; but who would venture upon such Excesses, because they have no Remedy: 'Tis true, it may serve to Turn upon an Emergency, but it would last destroy the Tone of the Stomach. Those who are used to fuddling Bouts can best inform us on this Head; they tumble into Bed with their Bellies and Heads full of inflaming Liquors, full of a Load they cannot digest; in the Mornings they are squeezed and they force their Stomachs to give an Account of their Debauches, they strain and reach some small Remains off; but, the far greater Part is got beyond it, and must be carry'd another Way: Upon repeated Bouts, the Stomach is too much wash'd to contain any natural Ferment; it; the Secretion is made, indeed, as usual, but loaden with very exotick Particles which rather inflame the Part than gentlelly vellicate it; the Spirits upon this uneasiness, Twitching run apace into the Fibres of the Muscles; and it is ever and anon

exo



cited to cast up its Contents upon the  
fast Weight thrown into it; so fares it  
with constant Strainings, the natural Fer-  
ment is emptied, and more is invited into  
before it is ready for the Work, and, by  
degrees, the Stomach is destroy'd. Parts  
will suffer, if Humours are carry'd thro'  
them where Nature never design'd it, or  
where more are discharg'd thro' them, al-  
tho' destin'd for that Work, than what is  
natural: And therefore in such Cases, where  
the Consequences of immoderate Exercise  
are prejudicial, and enough of it cannot be  
had to answer the End, we should content  
ourselves with a moderate Use of it, and  
supply that Defect by some of its fellow  
non-naturals, which contribute towards  
the Design. For Example: There are cer-  
tain Appearances that our Juices are too  
thick, and Exercise alone can't be sufficient  
to attenuate them, because the Expence of  
Efforts we are at by moving would encrease  
the Viscidity by exhaling them; we must  
remove into a warmer Air, we must  
use an attenuating Diet, we must sleep little,  
we must promote Perspiration, be cheer-  
ful, and great Application to Studies must  
be us'd: These are *Succedanea* for a  
Deficiency in Exercise, they rarefy our  
Juices, re-dissolve the Coagulations, invi-  
vate our Fibres, and agitate our Spirits,  
by which the Blood is mov'd regularly for-



ward, the Secretions are kept in due Order, the Blood is render'd thin, the Phlegm agitated, the Spirits are again rightly separated, and all our Functions recommence in an exact Manner, and Health is there recall'd, even without the Help of Medicines, if the Deviations from it were not excessive.

AMONG all Exercises whatever, those the Mind are the most surprizing: For how unaccountable is it to see Men grow more gre or fat, by their Application or Indolence? Let some feed ever so plentifully yet if they study hard or fret much, these delicate Repasts will not fatten them, their Juices turn eager and run the Blood into Concretions, and great Quantities of Water drain them insensibly: Obstructions ensue, Consumptions and Hypochondriacisms waste them insensibly away; whereas on the other hand, chearful People, and those who fret at Nothing, with moderate Stomachs, will be plump'd up and be vigorous: the Spirits are plentifully bred, the Heart briskly mov'd, the Circulation is urg'd regularly, the Secretions, among which reckon *Perspiration*, are exactly performed, the Blood is equable in its Mixture, Health is preserv'd. But more of this anon.

REST is opposite to Motion; and if Motion has its Advantages, Rest also does not want its Conveniences: For where the Blood moves too quickly, or ferments too much, Rest and a convenient Posture do soon calm its Fury. In Hæmorrhages this is evidently appears; for in an immoderate Flux of the *Menses*, an erect Posture will make that Flux elude the Force of the most powerful Astringents: But on the other hand, in Bleedings at the Nose, an erect Posture must be commanded, because the Blood's Motion upwards is retarded by such a Situation, but forwarded by any other, it inclines more to a Slope. If Rest restrains the Motion of the Fluids, it also unlooses our Fibres, and cures their Rigidity, that where the Perspiration is too expensivè, it puts a Check to it, and we recover the Lassitudes brought on by too many evacuations; and whereas Excess of Motion brings on Rigidities of our Fibres, it cures old Age; *Rest* relaxes them, and opens the miliary Glands and all others open, helps to prolong Life. It is easy to see how when we exceed in an unactive and sedentary Life, because the Water begins to grow pale, and contain a large, gross, white sediment, the Colour of their Cheeks grows pale and wan, the Spittle grows thick clammy, the Stools are cover'd over

with a *Mucus*, and are not thrown off proper Seasons, their Stomachs are infected with Wind and four Belches, their Heads grow heavy and dull, and their Spirits not free, their Appetites fail, and they are weighty to themselves, and at last their vital Heat decays.

WHERE Rest is necessary to repair Weakness on a sudden, the horizontal Posture is of all the most convenient, because where the Heart, from the Want of Spirit cannot with Ease throw the Blood equally to all Parts, the lower will be fill'd, the upper will be depriv'd of their Quantities; but this Posture contributes to make all share and return alike; so that Strength will be equally distributed to the whole Body: And moreover, in this Situation, the Heart is propp'd and bore, and admits a larger Quantity of Spirit to perform its Functions; and we see how naturally Persons drooping after Blood-letting prevent Swooning upon lying down.

WHERE Rest alone is not a sufficient Relief for the Repair of Damages done, we must look out for Assistance among other Non-naturals; the Air must be pure, the Diet inraffating, our Evacuations must be proportion'd to the Case in hand, Passions must be calm, and Sleep must be

ourag'd: For as Rest checks all Excesses  
 the Motions of our Fluids, where it  
 amount to do the Feat of itself, if  
 would avoid Expences, they must have  
 ourse to all the Assistance Nature affords  
 which however is all too little when  
 as have taken footing; we therefore  
 principally of sickly and unhealthful  
 constitutions, when Diseases are in their  
 cy; for once they have commenc'd,  
 must call for proper Assistance, and  
 every Prescription order'd carefully, as  
 must observe a due Regimen of Non-  
 als, without which Caution the best  
 ods would prove ineffectual. A Re-  
 therefore, and true Methods must,  
 a Supposition, go hand in hand, and  
 ally concur to reinstate the Diseas'd.  
 are often too weak for compleating  
 purpose; and the Physician must make  
 Prognostick, and leave it to the  
 of the Patients, whether they are  
 to stop or go forward in prolonging

tion then, if *moderate*, promotes or  
 the Deficiency of Perspiration, makes  
 bodies lighter, promotes the sensible  
 tions; if *immoderate*, it hardens  
 ores, hinders Perspiration, makes us  
 and makes us sweat; because a mo-  
 Exercise moves the Blood gently,

makes the Steams fly off by the Pores, the Urine by the Kidneys, as also promotes the Descent of the Excrements, and all Secretions; for it gives a gentle Shock to all our Fibres, and therefore encreases the Contractions, and these promoting Blood's Motions, Secretions go forward apace: But if it be *immoderate*, *omnium vertitur in vitium*, Stools are thrown down precipitately, Sweats flow in great Room of Effluvia, and they being specifically heavier than Steams, as Water is than Vapours, we must necessarily grow lighter, and indeed all the Secretions, being encreas'd, contribute to lighten us.

*Rest*, if *moderate*, relaxes and unbinds our too tense Fibres, it makes us lighter, and disposes us to perspire; but if *immoderate*, it makes us heavier, and diminishes both the insensible and sensible Evacuations, because Fibres not exercis'd, have not so many Spirits running into them than what is sufficient for their Nourishment, and therefore they are not so tense as when Spirits are frequently contracting them. We are chiefly upon Rest, because the Means by which Passions are excited reside in the Brain, there being no Call for any Action to remove those that are bred, People may employ that Store in the Pursuit of Joy, and for this Reason also Perspiration



goes forward, because the Spirits flow plentifully into the Heart, and contract it regularly, and therefore they will perspire: But when it is too much indulg'd, the Humours contract a Grossness, the Shocks usually given to the Fibres, and being useful to them, are abated, so that neither the peristaltick nor any other is continued, and at last Obstructions, Stagnations, and a fatal Warm of Diseases ensue,

It would be in vain to descend to all the particular Exercises, because common Sense will instruct every one what Parts are most exercis'd in the several Species of them; every one knows how great a Difference there is between Riding, Tennis, and Sailing, and there are Exercises for particular parts, as well as for the whole Body, which must be selected according to every Person's emergencies: *Walking*, for Example, strengthens the Limbs and lower Parts, *Quarts*, the Arms and Breast, *Coaches* shake the whole Body, but I'm afraid later Conivances, by lessening the Motion on all sides, have chang'd this *Exercise* into *Rest*, that they prove bare Conveniencies to take the Air in; *Riding* regards the Bowels principally and the Lungs. I must observe, that the Exercise of *Swimming* is an equivocal exercise, and either warms or chills according to the Length of Time we use it; for

if we stay a small Time in the Water, Constriction which the Coldness of Water gives our Fibres, makes a quick Circulation, and consequently heats us; but if we stay long in, our Fibres become rigid and inflexible, and our Fluids are coagul'd, so that the Circulation is of Course retarded, and we therefore are chill'd. But there is one *passive Exercise* which of others is the most fitted for promoting Perspiration, namely, *Brushing*: If it be of Use to such as indulge in Ease, it becomes more so to leprous Persons, whose Skins are scal'd over every where, their Perspiration can never be free without brushing the hard Covers of the Pores, and they ought after Brushing to plunge in cold Water, not only to continue their Perspiration but also to cool that Itching usual after Brushing, for without this Caution, it would give them a Heat and a constant inclination to scratch, as they who are in this Condition know very well.

BESIDES the Remarks already made on Motion and Rest, 'tis very observable that several Positions are proper and inconvenient in causing, preventing, or relieving certain Disorders, as has in part been already taken notice of; therefore we will defer to some further Particulars on resting Situations, and subjoin a Rationale on the

They who are subject to \* *Syncope's* should avoid Kneeling, because the *Psoæ* Muscles lying under the Iliac Branches and being stretch'd by the Bending, press upon these Vessels, and hinder the Descent of the Blood to the lower Parts, whereupon the upper Parts are more loaden and fill'd, insomuch that the far greater Share of the Fluids circulates only in the upper Vessels; the Heart then will receive more every † *Dia stole* than can readily pump out, and will thereby greatly enlarg'd, so that the Nerves, running along its Fibres, will be much press'd upon, and the Spirits will not be capable to circulate in them, till so large a Quantity is fill'd in the upper Part of the *Nervus cordis*, as will force its Way thro', and then the Heart will be again contracted, and no other; this || *Peri systole*, this Interval turns the *Syncope*, because this Stop is the occasion of it.

IN *Night-mares* a supine Posture is observ'd most commonly to introduce them, which places the Stomach, fill'd with Viscerous, upon the descending Trunks of the Vessels, which straitens and hinders thereby the Passage of the Blood to the lower Parts,

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Swoonings. † Opening of the Ventricles. || Rest  
Contraction.

so that there is a Stop put to it some where about the Breast; this gives us, whilst sleep, a lively Idea of Weight upon which continues till the Posture is changed into a more convenient one, and upon waking, the Load and Flutter continue for a small Space.

In a *Dropsy of the Brain*, \* Dr. Lower advises a prone Posture, because, adds if the Patients lie in a supine one, the *Lympha* will break through the *lucid Septum* and rush into the *Medulla spinalis*, compress upon the Nerves, and introduce other Disorders; whereas if it had been prone it would have run into the *Infundibulum* and have re-circulated with the Blood through the Jugulars. Please to take the Author's own Words on this and the former Case. " Moreover, whereas the fourth Ventricle is plac'd under the Cerebellum, is lower than the other Ventricles in the Brain, and even than the *Infundibulum* itself; therefore it happens that Lymph, separated from the *Plexus Choroideus* into the Ventricles of the Brain flows down into the fourth Ventricle more deep than the rest, rather than into the *Infundibulum*, especially if any

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\* Lower, de corde.

sleeps with their Heads back ; from which Settling of Humours that Cavity is much fill'd, and is so far loaden, as by the Sense of its Weight communicated to the Nerves of the Præcordia, an Oppression of the Heart and an Incubus are often introduc'd, And therefore it is usual for Persons troubled with \* *Hydrocephali*, never to sleep in a supine Posture without Damage, but they are obliged to turn from side to side, that they may the better avoid those Anxieties : Yea I knew a Person long ago subject to a Night-mare, a Man otherwise robust and healthy enough, who could not sleep upon his Back for two Years, but that Moment he was seiz'd with a Fit of it ; so that he was forc'd to have a Chamber-fellow, who, as soon as he heard his Groans, with which the Disease usually began, he should turn him on the other side ; from whence it happened, that these Fits were prevented.

AND moreover we observe, that a great many Children newly born, if they are subject to Convulsions, do never sleep long or quietly in their Cradles, but they are seiz'd with various Spasms and Startings: The Cause of which seems to be

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\* Dropfies in the Head.

“ this,



“ this, that since their Brains abound with  
“ much Water from this supine Posture,  
“ such is that in their Cradles; the Water  
“ contain’d in the Ventricles of the Brain,  
“ by reason of the sloping Situation, dripps  
“ down into the fourth Ventricle rather  
“ than into the Infundibulum, and so loads  
“ the *Medulla oblongata* from whence spring  
“ the Nerves of the *Præcordia*, very much  
“ and, by compressing it, hinders the Pa-  
“ sage of the Spirits into the Nerves, from  
“ whence an Oppression of the Heart, and  
“ at last convulsive Motions ensue. And  
“ this is therefore the more likely, because  
“ in a contrary Posture, namely, within  
“ the Nurses Arms, or in their Bosom,  
“ where the Head is erect, they sleep more  
“ quietly and securely. Besides, this very  
“ Thing I happened to observe in a Student  
“ at *Oxford*, who died four Years ago of a  
“ Dropsy in the Breast; who in the last  
“ Stages of his Disease, could not sleep but  
“ with his Face downwards: For if he  
“ try’d to compose himself with the back  
“ Part of his Head on the Pillow, within a  
“ Quarter of an Hour he wak’d frighted  
“ with horrible Dreams, and was moreover  
“ afflicted with a Trembling and Oppression  
“ at his Heart. And in his Brain, upon  
“ Dissection, the Ventricles were found  
“ much stretch’d with Water, without any  
“ other Fault in it.”

IN *Epilepticks* the Limbs are all drawn up, and strongly too, so that they require a great Strength to open them, and we see it common for the By-standers to unlock them: It ought to be known, that this is an obvious Mistake; when the Fit is over, the Nerves relax of Course, and the Groans they make under such Circumstances, are not Complaints: They have lost all Sense, and are incapable of making any; but they are the Effect of Contractions on the Lungs, and are casually made by the Struggles in the Trachæa. We are only to take Care, that such People fall not into the Fire, or from a Precipice, or with their Head or Body against any thing that may crush them; for to unbend a Nerve which is strongly contracted, is using a Force that may break it.

SITTING is a Posture which disposes to Palsies of the Legs and Thighs, especially when they sit on any hard Seat and long together; that Numbness and Sleepiness of the Limbs, after long sitting, is no other than temporary Palsy; the Pressure made upon the Branches of the *\*Cauda Equina*, hinders the Circulation of the Spirits that Way

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The Nerve that comes out of the *Os Sacrum*, or one of the lowest Bones of the Back.

for

for a while ; and the Continuance of such Posture would, at last, dispose to a real Palsy which would be best remedied by Locals : we sit so as to press the Belly, namely, with our Legs a-cross and leaning forward, that we are also subject to Pains of the Bowels not depending on Wind ; for the Pressure squeezes all our Bowels close, and makes Obstructions in their Vessels ; so that even touching the Bowels of such Persons gives them Uneasiness ; and nothing sooner relieves them than warm Fermentation. 'Tis a common Case, but the Reason of it as well as the Success of so easy an Application, has not been much heeded ; wherefore Students who write much, should be cautious of their sitting Postures ; for we often in Practice, meet with Complaints of Pains in the Bowels and Stomach of such People, for which long Courses have often been prescrib'd in vain : I have heard the famous Doctor *Cole*, from such Posture, got an Abscess on the Muscles of the Belly ; and I have known Students oblig'd to quit their Studies for these Complaints ; whereas, if the Physician call'd had rightly taken the Case, there had been no need for such a Neglect or Indulgence, since a Change of Posture into an erect one at a Desk, as the Custom now is, and a few Externals, have done the Feat with many such Patients, and have made them go on chearfully.

So much for certain proper or inconvenient Situations. We shall now descend to particular Exercises convenient for different Persons: *Sydenham* commends *Riding* in Consumptions to a very high Degree. We have already observ'd, \* that original Consumptions could receive no Cure from this Exercise, because an Ulcer can never unite without proper Medicines; and if Ulcers of the Lungs were to be cur'd by Exercise, it were full as reasonable to expect that Ulcers elsewhere should also be heal'd by the same Artifice, which however never happens; so that this Exercise is really adapted to Asthmatics only, where the Shocks the Bowels receive, serve as so many impelling Forces, that drive the gross and stagnating Fluids thro' the small Tubes, attenuate them, and set them again into the circulation, and shake off that tenacious mucus from the Lungs, and thereby give room for the Entrance of Air, and dry the Vessels, and cause them to recover their Elasticity; so that entrance of more Humours will at last be impeded, as well as the Flux of them diverted into other Channels, and the Patients with the Continuance of the Exercise, be re-instated. However worth Observation, that some Consump-

Critic. Febrium.

tives

tives are often reliev'd by this Motion know one who is very subject to Colic in Town, and who has twice been on the brink of Danger, but was relieved by proper Applications, and Riding always reliev'd him.

RIDING also is convenient for such as are troubled with extemporary Productions of Gravel, it shakes it off from the Pelvis, and does not suffer it to take up its Abode there, which if it did, in Process of Time might, by daily Additions and the grosser Parts of the Fluids, coalesce into a Stone; but this Exercise in the Stone is dangerous, for the Size may be such as would block up the Passage, or its Motion may be such as would tear all the Vessels, and Inflammations, Bleedings, or Suppurations, would necessarily ensue; and *Barbette's* Caution has always been religiously observ'd, that a \* *Great Stone is not to be mov'd*, unless, as the Commentator *Tacquetus* says || after the Administration of Medicines that dilute the Passages: Nay

\* *Calculus, si sit friabilis comminuendus est & expellendus, magnus non movendus. P. Barbette. p. m. 213.*

|| Post justam, videlicet, emollientium, laxantium, dyonorum, viasque dilatantium tam interiorum quam exteriorum usurpationem. *D. Dekkers. ib.*



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commentator further observes, \*that even  
tharticks, properly so call'd, and unless  
they be softning ones, encreate the Torments,  
and move the Stone, and dō no Good :  
hence I cannot but be surpriz'd at Dr.  
Syne's Mistake on this Head ; he says,  
proper for those *who are troubled with  
Stone or Gravel, to ride much over  
rough Causeways in a Coach*. It had been  
as proper to have said, they who are  
troubled with the Stone, should bring on  
Inflammations, Abscesses, Bleedings, or Sup-  
purations of Water, where Physicians will  
find Employment enough : But we have  
Reason to call the Doctor's Justice in  
question, he surely speaks his Sentiments ;  
I do also assure him, I have been often  
induc'd in to relieve Patients suffering the  
same Symptoms from this very Advice ;  
how should they not suffer under such  
great Shocks ? I know it is the common  
opinion, that Riding does good in the Stone,  
but the Doctor has here also fail'd of that  
Precision and *Exactness*, and of that just  
Observation he boasts so much of in his

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Potius Laxantia Authoribus dicta quam proprie dicta  
artica, ut putat, cl. D. G. Relsinkius in Epitome me-  
dica cognoscendi & curandi corporis affectus : Hæc enim  
potius augere, calculumque commovere, nihilque emo-  
endi ægris asserere, L. 3. c. 19. de calculo Renum & vesicæ,  
par. F. Dehhers, p. 212.

S

Preface.

Preface. *Riding* in the Gout is a commendable and useful Exercise, for by the Parts are exercis'd without Straining the Juices are mov'd and attenuated, and many of them fitted to pass thro' the Pores of the Kidneys, and by Stool, so that strong Pains are at least prevented. I can't omit taking Notice of one Particular, which may be of use to *Gouty* Persons: When their Fits are over, their gouty Limbs are left stiff and unweildy, and unactive, nor can they creep along without Pain and Trouble, tho' assisted with Crutches also; the Humour is so malicious as to leave Chalk-stones in their Joints, or however a milky Substance (which I have seen taken out) and which in process of Time turns into Stones. This Humour at first, is so thin as to admit of easy Evaporation, and 'tis a pity so easy and so useful an Application as I'm going to mention, should not be brought into Practice, which can do no Harm, and which produces so certain, so evident, and so successful good Effects on them, as to make them walk instantly, even on a Slope, without Pain, or down Stairs, who before did not dare to venture their Soles on the pavement of the Ground without a Prop; I mean, that when the Fit is pass'd, and they begin to recover their Stomachs, and to take their Rest, they can converse with their Acquaintance without Complaints, and have only a Disab-

upon them, or a Weakness felt only upon  
 Walking or Moving the gouty Limb,  
 them, at that time, bury the gouty Part  
 under *hot Sand* twice or thrice a Day, and  
 keep it in for about a quarter of an Hour each  
 time, they will soon feel the good Effects  
 of this seemingly trifling Fomentation: It  
 is out by the Pores, this Matter, which  
 residing among the Tendons, and within  
 the *Periosteum* would harden into a Chalk-  
 stone, and stand in the way to hinder Mo-  
 tion; it supple the Joint instantaneously,  
 and gives new Life and Vigour to it. As I  
 have often advis'd this to gouty Persons  
 with Success, they who will give it the  
 trial at a proper Season, will reap the Ad-  
 vantage of it. This Exercise is beneficial  
 to Hypochondriacs, and others who have  
 weak Nerves, because the Succussions made  
 in the Horse, are so many Stresses laid upon  
 the fibrous Parts of our Bodies, that the  
 very Particles in which they are soak'd,  
 which relax them, by this mild Agita-  
 tion exhale, as we see Water on the Earth  
 is by a gentle Heat of the Sun, or by  
 the Licks of a Dog, and thereby become  
 drier, and so fitter for Action: There is a  
 certain Pitch of Tension convenient for  
 Motion, which if Nature exceeds in, or fails  
 the Fibres of an Animal become *rigid*  
 and are thereby made incapable  
 of obeying the Commands laid upon them,

by the nervous Juice, which is the *Medium* of Actions, running into the Nerves and Muscles: If they are *rigid*, they become too compact to be bent by any Force the Brain can communicate, that *Æquilibrium* is destroyed; whereas there is an absolute Necessity for the Fibres and Fluids to be counterpois'd in such manner, as if the Fluids stretch them to a certain Pitch, they ought to rebound and compress them with the same or equal Force: 'Tis this Mechanism by which Life is kept on Foot; this is the Action and Re-action, so notorious in Animals, and so useful for perpetuating the Circulation and all its Appendages. The Abuse of Things are liable to Abuses, and it falls with *Riding* as with the whole Series of Usefuls, People find them advantagious, and their *Encomiums* are pegg'd too high in the ears of their Admirers: This Custom can never be too much guarded against in Physick; what opprobrious Names have not some of our Gentlemen of the Faculty acquir'd by their over-weening Opinions! One Bleeds for a very Distemper, a second Vomits upon every trifling Occasion, and a third is wedged with Catharticks; and all these are favourite Errors; for I think we may justly repute the Prescriber guilty of Error, who will at all *Hazards*, and upon every Emergency, tempt that Evacuation he is fond of: These are dangerous Follies to be practis'd,

et — : But as Physick is most solidly  
 built upon a reasonable, and not a blind Ex-  
 perience, *this* alone should never be set us  
 for a Pattern, without the favourable Affi-  
 nance of *that*. This *blind Experience* is  
 like Men walking a Road they are perfectly  
 acquainted with, in the Dark, but if any  
 body is thrown in the Way, it is almost cer-  
 tain they will stumble ; whereas Reason  
 teaches us both this *Road* and the *Rubs*  
 to : But the true Cause, in those we call  
 experienc'd Men, is this, that they travel  
 and jog on *par Routine*, in a Road that ne-  
 ver is in all Respects the same. Pardon the  
 digression, and I shall remark, that if the  
 fibres are *lax* and *flabby*, there is not a suf-  
 ficient Quantity of Spirits in the Brain to  
 enter into and contract the Nerves, as they  
 ought to do, e'er Motion can be executed :  
 the Fibres are already upon a Tention,  
 and *living* is a destructive Exercise ; but where  
 they are too flabby, it must of Course con-  
 tend to exhale their too abundant Humi-  
 dities ; and, as neither Hypochondriacs,  
 or Hystericks have their Nerves under the  
 same State and Tention, it must follow, that  
*living* is not always convenient for those  
 constitutions : I know not how it has pre-  
 vail'd in Physick, that a Disease should be  
 attributed to proceed from the same Cause al-  
 ways ; but surely nothing can prove more  
 injudicial to Mankind, than this epidemick



Mistake; when a *Scurvy* is nam'd by the Term it is understood, that the Juices are under a Degree of Coagulation from the Tartareous Salts prevailing in the Vessels introduc'd by some of our Non-natural and yet stanch Authorities have dignified very different Condition of our Fluids with this numerical Name; and whether we speak of Foreigners or Natives, both agree in the Head. In like manner the Hypochondriac Disease is look'd upon by many of the Profession, to retain to those ill States of Health, where the Nerves are weak and flabby; and to speak Truth, it mostly is that Tribe: But it were easy to convince those Gentlemen of their Error, if they would give themselves leisure to consider how many Symptoms are produc'd by the Disease, which prove demonstratively a very differing Condition of our Fluids and Solids to be the Case; for, what can differ more widely from a *relax'd* than a contracted State of our Fibres? *Here* the abundant Humidities are exhal'd, but *there* the Fibres are soak'd in them: *Here* the Blood is excessively hot and highly sour, *there* it is chill'd, and the Sour is loaded with Moisture: *Here* the Nerves are drained of their necessary Humidity, are twitted with the natural Sour, and shrink up, *there* they are drown'd with too much Water, and do thereby become flabby,

and weak ; a very short View of the Hypochondriack Disease will prove the Assertion beyond Dispute : Hypochondriacs as well as Hystericks, are frequently hurried into true convulsions ; where the Blood, and by a natural Consequence, the Spirits also, are under a tumultuous Motion ; nothing cures or prevents this Symptom better than that noted Relaxer *Opium* ; but if a relaxing Medicine is the sole Remedy, it may fairly be inferr'd, that the Cure of this Disease cannot depend upon such Medicines or *Remedies* that will hurry on those Symptoms we have the greatest Dread of ; and were there no other Proofs remaining, methinks this is sufficient to give a Physician room to suspect too univocal a *Rationale* on this Disease : Nay, that very Gentleman who first contriv'd this Cause, swerves from his own Sentiments with the weak Reason of *Idiosyncrasy* : He well perceiv'd his Reasoning, or rather *Hypothesis*, and would not account for the Operation of every Method and beneficial ; and therefore he takes Refuge in Constitutions, and peculiar Temperaments ; he found that Steel, Bath-Waters, the Bark, and even a Milk-Diet, had equally good Effects upon Hysterical Women ; he had settled a Weakness of Spirits on impoverish'd Blood to be the intermedial Cause of this Disease : As for the Steel, Bath-Waters, and Riding, he was at no

Trouble to account for their Efficacy ; but when we find by Experience, that Mill agreed with some of that Tribe, when their Remedies fail'd of Success, he then begins to reason a-new, and this is the note of a Practitioner (Dr. Sydenham) who expresses himself at all the *Hypotheses* ; We may pretend to reject a *Rationale*, but then how shall we act ? For no Physician gives Remedies to effect he knows not what ; he must certainly observe a Change to the Better or Worse upon the Administration, for such grand Courses are never given *Gratuitis* ; and he must be very heedless if he does not strictly remark the intermediate Steps Nature takes upon Recovery, or the Sickning : These Changes let us into the Secret of the best Hypothesis to be embraced for Example, We prescribe a Steel-Course for an Hysterical Person, and we observe whether she either grows hotter, or her Pulse advances ; or her Secretions are more regular ; or her Spirits move with greater Vigour, or her Nerves grow stronger ; and it is remark'd that these Changes do no Harm, or advantage her Health. Can a Conclusion more natural be drawn from hence, than that the Cause was too great Tension or Laxity, or that the Blood was too sour, too hot, or too watry, according to the Effects the Medium has upon the Patient. So that Reason backing Experience, from

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the surest *Criterion* for buiding up a true  
structure for an *Hypothesis*; if the *Juvun-*  
and *Lædientia* are neglected, there is no  
possibility of a right or sound Judgment on the  
issue: These are the *Arcana* great Men  
depend upon for prescribing by, when they  
are left in the Dark. As therefore no Ad-  
vice can be justly given without weighing  
the Varieties of Circumstances, so this  
Exercise of Riding could never be advis'd,  
as some have done, in *Colliquative Diar-*  
*rhæas*, if they had weigh'd this Disease  
under the bare Consideration of a Flux:  
and most certainly the Irritations which at-  
tend this Disease, must at first be hasten'd  
and urg'd forward in a sensible manner;  
however, as these are subsequent to a Weak-  
ness of the Solids, and that this was the  
occasion of these, Riding, if follow'd with  
specificks against Irritations, by abating the  
original Cause, has been found an advanta-  
geous Exercise: It fares in this Case as it  
does with Indications running counter to  
each other, both Applications fully act their  
parts; namely, Opiates would allay the Ir-  
ritation, and gain a Truce, till Riding had  
open other Sluices, and thereby had di-  
verted the Flux of Matter from the Intes-  
tines to the Pores; by which Stratagem the  
Intestines would become less soak'd in Humours,  
and would thereby have leisure to recover  
their usual Tone: I say, that a Flux de-  
pending

pending upon a severe Bent of sharp Humours towards the Bowels, and which do not borrow its Origin from such a State of the Solids, must of course be advanc'd into a fatal Disorder by Riding, because the Shocks given by this Agitation, added to the Twitches occasion'd from the Acrimony of the Humours, must stand Proof against all the Advantages ordinarily accruing from this sort of Exercise, and will necessarily determine the Spirits and Blood to flow to the Intestines, where the Secretion will be enlarg'd in Proportion as the Hurry drives the Humours into those Parts, and the Amplitude of the secretory Ducts give a full Handle for. Another Benefit received by this Exercise, whether in a Coach or on Horse back, is, that it gives Relief to those obnoxious *Watchings* so often met with in Hypochondriac Cases; but then it ought to be remember'd that the Exercise must be proportion'd to the Circumstances of the Undertaker; Sleep and Oblivion are in effect the same thing: They who sleep soundly forget all their Miseries; and they who are watching, forget and lose the just Ideas of Things, are a-sleep: They also seem to proceed from the same Cause, inasmuch as what ever puts the Spirits into a Calm, will bring on sweet Slumbers; and on the other Hand, whatever Hurries them, drives it away, then we seek new Postures to find it.



Mankind are so variously fram'd, that their Temperaments and Constitutions differ in Degree, those Anguishes of Mind, which would precipitate one half of the World into Madness, would overwhelm, and turn the Remainder into Mopes: There is a near Resemblance between this Case and Drunkards, for what Quantity of Liquor makes one Man furious, the same will make another sleep; or as Mr. *Dryden* says, in a sportive Manner of a certain Country, "So much Liquor as makes us quarrel, will make them get Children." And thus it happens with Exercise, it should be squar'd to the Constitution of the Patient, and, to complete the Analogy on Drunkards, as every Man in Liquor is allay'd by a few more bumpers, and chang'd into Stupefaction, if a little Exercise makes us restless, Fatigue will lull us asleep. It is not easy to say how the Spirits behave themselves on such Occasion, however, the Explanation may be allow'd as true, if we avoid Contradictions; and there seems to be no other Difference between Watching and Sleeping, than between a Storm and a Calm: The Winds in the former seem to blow the Tubes of the Brain into a full Stretch, and to drive in a Hurry through every Fibre, so that that Trembling, usual to an inflated Nerve, is hereupon so augmented, that it

be-

becomes continual, and then we watch perpetually; but as soon as those Filaments are drain'd of their Contents, or are overstretch'd with them, then this Motion and *Hurry* become languid, or are quite abated; for whether the Brain be robb'd of a determinate Quantity of Fluids, or it be so fill'd as to enlarge the Fibres beyond the contractile Force, as is the Case of Drummers, the Motion will be calm and easy, and then Sleep ensues: If therefore *Hypochondriacs* sleep with using Exercise, as they are known to do, this Event must depend either upon a Diversion of the Spirits into other Channels, or upon inviting a larger Share thither than can well be distributed in a certain Time; in which Season few Slumbers are indulg'd, nor do they awake till either a larger Quantity is heap'd up again, or till the excessive Number be distributed; so that Sleep seems to depend singly upon a great Calm of Motion, whether the Spirits be few or too many: Hence allowing this Explanation to be near the Truth, it may well be explain'd how \**Pervigiliums*, the Jolting in a Coach, even the Rocking in a Cradle, is of Use for this Disease seems to be a middle Way

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\* Where People are extremely drowsy, and lie asleep, yet do not rest, but rave or rattle,

tween Sleeping and Watching, they neither can be said to sleep nor be awake, they give Answers as if they were awake, but they doze as if they slept: It appears then, if the Brain were alternately charg'd with a Defect or Excess, and a Mediocrity of Motion in the Spirits, as we see in some Plants alternately scented and fetid; and its rotatory Motion either diverts the Stream of them into other Tracts, or fills the Brain so full, that an absolute Calm ensues.

*Catarrhs* or *Defluxions* are easier prevented than cur'd by this Exercise, because Peristalsis, which is mainly promoted by Riding, being much encreas'd, no Superfluities are suffer'd to harbour in our Vessels, nor make any Attempts on our Bowels, and moreover our Pores along with the whole System of our Fibres are rendred too rigid to yield to the Entrance of Air, or however become so close and compact, and so inflexible to external Injuries, as not to be alter'd from their usual Secretion, which is the settled Standard for Health. And so it fares with Clowns, who at all Hours and Seasons oblig'd to do their Masters Drudgery, the severest Weather is made a Sport of, whenever their Duty tallies with their Inclinations: This Hardiness they owe to constant Practice, and did not the higher Ranks  
of

of Mankind soften themselves by subsequent Indulgences, they might bear the Fatigue of a Camp equally with the rude Vagabond; but no sooner is a Journey ended than they have Recourse to every Comfort in Life, upon their Arrival they bury themselves in a hearty Meal and Plenty of Wine, they approach to the Fire-side, where Fuel clapt on enough for a rejoicing Night, and give particular Orders to the Hostess that they be deep sunk in Down well warmed, and thus they destroy all the Advantages they had receiv'd in their Journey, while the Servant loses nothing of what he has gain'd: These Gentlemen are Losers by Fatigue, and they depart from their Journey more subject to catch Colds than when they enter'd them, and therefore it can't be supposed I speak of any Advantages accruing from such Riders. 'Tis a settled Maxim, that which prevents a Disease will also cure it, and so long as Defluxions continue to remain such, Riding is useful; because of this Notion, under which they are taken, only a Translation of Humours from the external to the noble Parts, which in the present Case is a Diminution of Perspiration and thereupon an Accumulation of Humours upon the Breast, which distends the Vessels too much, puts an *Embargo* on the regular Motion, and, by some degree of Stagnation, grows gross and thick.

which the Lungs in the last Scenes are  
dam'd and ulcerated. I have already ob-  
serv'd of how little Use this Exercise can  
be in these Stages, and therefore it is only  
to be us'd whilst the Humours are hovering,  
and have not thoroughly perch'd; for so they  
are in a proper State of being mov'd by  
purgatives, which is nearly the Sum of  
what is pretended to by this Motion in  
people liable to, or suffering under De-  
pressions.

*Anasarca* Dropfies are reputed to re-  
ceive Advantage from this Exercise, upon  
the Footing of Exhalation: The repeated  
Strokes move the Pond, and evaporate the  
waters, and the Fibres being drain'd of  
their Burden regain their elastick Tone,  
which they have so far lost, that the Fingers  
or any Pressure whatever give fair Proofs  
of it; for press any where but ever so soft-  
ly they give Way and frame a Pit, which  
remains for a very considerable Time after,  
and by many slow Heaves the Fibres recoil  
sensibly, and this Property they will re-  
tain during Life; which if entirely lost,  
and has taken Possession, nor can any the  
strongest Remedies ever recal such an Aban-  
don, and it is a very lawful and very sure  
diagnostick of a sudden Change, if ever  
we meet with such a cadaverous State: In  
this Supposition all Advice is too late, for  
we



we must not pretend to work Miracles what Remedy has the Power of recalling lost Life? And so soon as the recoiling Property is lost, they are under the Empire of Death. Nay, we may add, that analarco Patients can receive little Advantage from Exercise, if they do not very early engage upon it, because it would require a large Proportion of Exercise for evaporating the Humid abounding, and larger than the Spirits of the Patients could bear up with at that time of Day, when Nature is oppress'd and carried down with a Deluge of Water or Phlegm; the Effects of the Exercise communicated by the Exercise, would not balance the retarded Reflux of the Humors from the Posture, and moreover there is Danger, that the Vessels being so very tender and yielding, would be ruptur'd or ulcerated, and then a cachectical Ulcer would commence somewhere in the Legs or Thighs, which would discredit the Exercise, give great Uneasiness to the Adviser, whose Reputation would justly lie at stake, for having injudiciously heap'd Disease upon ease, and such an one as gives more Trouble than the original Distemper, besides forcing the Patient to increase his Patient's Expences. These Ulcers are not cured without great Strength and Exiccants of the greatest Efficacy, besides an horizontal Posture, with the Advantages of internal Attenuants and

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gatives, do not complete the Cure but under a long Tract of Time. I say then, that wherever this Disease has deprav'd the Blood and Fibres to such a Pitch, as that the former is a mere Collection of Glear, and the latter nothing less than a Dough or Quagmire, and moreover where the Bowels are soundly prejudiced by it, whether by inveterate Obstructions, or Coalescences of some Ducts, or some such Extremes, this Exercise can never be suppos'd to be brought in Use, for here the whole Tribe of Purgatives, Diureticks, Diaphoreticks and Attendants, are too weak to contrast with the Disorder; so that we may justly say, the Habit or Disposition to this Disease is the proper Season for using Exercises of this kind. There is one Caution Physicians call'd to such Patients should strictly follow, and it is this, they should take the Advantage offer'd them after a good Night's Repose, and when they see the Legs of the Patient lank and quite faln, as they generally are in a Morning, to fit them with new Stockins, which they ought to wear the whole Day; without this trifling Caution, as it would seem, Catharticks, tho' ever so strong, will fail of having their desired Effects; their Legs will ever continue to swell, nor will their Fibres ever recover their Elasticity without this Method. It is true, this Caution alone will not suffice

to complete the Cure, because External and Internals should be apply'd and administered, which have an actual Stypticity in them. If the Legs are infested with ever so mild an Ulcer, we find it necessary to blend gentle Stypticks along with Balsamics, because the sloping Posture retards the Reflux of the Juices, which is apt therefore to cause too great Distentions in those Parts, which are in some Measure obviated by Stypticks, as Interceptives; and the greater the Danger is of Relaxation from watry Humours, the stronger Stypticks do we apply to compass our Aims; and in the present Case I have known all other Remedies ineffectual, till we came to use Fomentations made of Balauftines, red Rose Flowers, Oak Bark, Sumach, and the like, boil'd in Water in which Steel was quench'd and to which rectify'd Spirit of Wine was added, at every Bathing, in the Morning, tying on the lac'd Stockin after it, and in the Evening upon going to Bed; and giving Chalybeats and the Bark internally for considerable Time, which did not act by attenuating Particles only, but also by the notable Stypticity and corroborating Quality.

HOWEVER useful Riding may be in many Cases, yet it has also its Inconveniences which it is proper we should remark to our Readers

Readers: Some so overcome in favour of this Exercise, that we hear all its Encomiums, it is set in so advantageous a Light, that they have not neglected to mention the least Benefit receiv'd by it; but I am afraid this is not all, for they seem to attribute to it more than its Share, they set it at a Panegyrick, perhaps for the Good they themselves reap'd by it. Be it so, 'tis certainly very instrumental in moving the Blood forward, and in making the Fibres strong and tense; but then it ought to be consider'd to what Point these Advantages are to be stretch'd; how far and no farther we must carry it: Nature bears no Excess, when she succumbs 'tis high Time to remove the Cause of her Failure, and it will plainly appear how this Exercise prejudices the following Diseases. In any Evacuation of Blood it highly encreases it, so that they who spit and cough Blood, who make bloody Urine, or have too many of the Menses or Hæmorrhoids, should forbear, for 'tis essential to Motion to shock the Fibres and move our Blood, and when the Vessels are open and ready to throw out their Contents without further Incentives, we must be very wanting in Physick, that we do not see the Disadvantage accruing from this Exercise. Let \* some say they cough'd

and spit Blood, let them tell us they find green Matter subsiding in Water and sinking when thrown into the Fire, and that they were cur'd by Riding, this Affair is not rightly stated; a Subsidence in Water does not argue Matter always; for though it is true that *Matter* will subside even in salt Water, which is specifically heavier than common Element, yet I can affirm that some Substances, which are not *Matter*, will also subside in Water, for *putrid Phlegm*, as the Antients term'd it, will also subside; and this happens when the oil Parts of the Serum are so strongly coagulated by the concentrated Acidities, as to become specifically heavier than even fresh Water it self: The Acidity gives it a greenish Yellow, and puts upon those who examine no deeper into the Affair, for any one who reads this History would really believe there was an Ulcer in the Lung which was cur'd by Riding. Moreover, what is more usual than to spit a little Blood with Straining hard to cough, which does not amount to what we usually mean by an *Hæmoptœ*, and therefore it cannot be justly inferr'd, that Riding conduces to the Cure of a Spitting of Blood, so that it can neither be affirm'd, that this Exercise conduces to cure a confirm'd *Consumption* nor an *Hæmoptœ*, to which end the Observation seems cited to persuade us;



the true Light it ought to be plac'd in is as follows: The Doctor had suffer'd a Catarrh to run on to the second Degree of a Consumption, and he cough'd continually, as he relates it, Day and Night, and cough'd up a tough and discolour'd Phlegm; the Toughness made him strain much, and so drew Blood out of the Capillaries, and the Colour along with the Settling of the Matter (spit up) in Water, gave Grounds to call it a *true and confirm'd Phthisis*, where- in Truth it appear'd to be a beginning. One only; and as in the second Degree of a Consumption, if the Strength of the Patient will allow it, Exercise is commendable, especially Riding, as it encreases Perspiration without wasting the Spirits, because even at that Season Revulsions are absolutely necessary, as far as allowable, so Riding conduc'd to promote the only Secretion that perhaps his Circumstances would allow of at that Time of Day; however, without the Milk, and the Regimen mention'd in the same Place, it had been impossible for the Doctor to have recover'd his Health, or have abated his Hectick; and I could give many Instances of this Degree taken off by a proper Regimen even without Riding, and when no Revulsions at all could be us'd, by reason of the Patients Weakness, one of the most remarkable of which I shall take the Liberty to subjoin. A cer-

tain young Woman was seiz'd in the Year 1710, *April* 19. with a Cough, with which she cough'd up tough and tenacious Phlegm discolour'd, that is greenish, yellowish, and streak'd with Blood, she was extremely hectic, her Pulse was very low and small frequent and quick, she was wasted to a mere Skeleton, with an *Hippocratick* Face as we call it, her Breath was thick and short, she had colliquative Sweats upon her, and fell into Syncope's very often in a Day, her Appetite was quite abolish'd, and her Spirits so low, that she was oblig'd to be led across the Room with the Assistance of her Mother and Sister, and a Turn of three Yards from the Bed and back again, was just as much Exercise as she could bear, she us'd more she fell into a Swoon. It was reasonable at first View to believe the poor Creature was doom'd to Destruction and that she was in the last Stage of a Consumption: I did not dare to administer Opiate, because she breath'd so short, and her extreme Weakness deterr'd me from Evacuations; and therefore I gave her the following Medicines.

℞ *Rad. Chin.* & *Sars.* ā ʒij. *Rass.*  
*Corn. Cerv.* ʒiv. *Fol. Capillor.*  
*ner. p. vi. Flor. Hyperic.* ʒj. *Infus.*  
*f. materialia pro decoct.* ℞x. *Edulcorand.* *Rad. Eryng. Condit.* cu  
 sum

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*sumat ℥vj. mane et sub vesperam,  
cum lactis asinini pauxillo.*

℞ *Syr. Balsam. ℥iij. Capillor. vener.  
℥iv. m. f. mistura, de qua sumat  
cochl. j. urgente tussi.*

℞ *Pulv. oc. cancror. ℥ij. Marg. pp.  
℥j. millep. pp. ℥ss. Sacch. alb.  
ad pondus omnium. m. f. pulv. di-  
vid. in chart. n<sup>o</sup> x. quarum sumat  
unam bis de die, superbibendo de-  
cocti Haustulum.*

℞ *Aq. meliss. ℥vj. Lact. Alex. ℥iv.  
menth. ℥j. epidem. ℥j. tinct. croc.  
℥j. conf. alcherm. f. m. ℥j. marg.  
pp. ℥ss. sacch. alb. qf. m. f. Ju-  
lap. cujus sumat cochl. iv. in lan-  
guoribus.*

℞ *Pulv. cort. peruv. ℥ss. extract.  
croc. ℥ij. bals. peruv. qs. m. f.  
pil. n<sup>o</sup> xij è ℥j. quarum sumat qua-  
tuor horâ quâque quartâ.*

℞ *Rad. Chin. sars. ā. ℥ij. rasur. ebor.  
corn. cerv. ā ℥iij. fic. ping. n<sup>o</sup> xij.  
fol. capill. vener. p. iij. hader. terrest.  
p. v. flor. chamam. p. iij. incis. f.  
ingredientia pro Thea.*

℞ *Syr. Balsam.* ℥vi. *Capil. vener.* ℥iij.  
*Bals. Gilead.* gtt. x. m. f. *missura cum*  
*qua edulcoretur precedens Liquor in-*  
*ter usum.*

By the Assistance of these Medicines closely follow'd, she recover'd and came to be very healthy; These corrected the Acrimony of the Blood, allay'd the hec tick Heats upon her, comforted her Spirits, and made her expectorate; so that within a few Weeks she, who was a Spectacle, became plump, by eating and resting well. As for my part I could not forbear pronouncing a fatal Prognostick, and all who saw her readily fell in with my Sentiments, that she was in the last Degree of a Consumption, but I had not then made a proper Trial to distinguish whereabouts we were; I took it upon trust that such an extreme Weakness, and such a discolour'd Spit, attended with so strong a Fever, must denote the last Stage; but yet it prov'd a Mistake, which however gave me Reputation enough.

I hope the Reader will excuse a Digression, which was of use to overthrow a Mistake too common in Practice; and, as I have said, that this Exercise is very prejudicial in Bleedings, I must also observe to them, that it is very improper for Women labouring under the *Fluor albus*. We ob-

serve

such Women, upon any the least  
of Motion, complain of Pains in their  
sides, and a flowing of the *Whites*: The  
s depend upon the Bent of Humours  
and determin'd thither by the Mo-  
tion; this hurries the Blood, and fills the  
vessels too full, so that Pain ensues, and the  
entirety flowing proceeds from the Accu-  
mulation of Humours in the *Hypogastick* and  
*Matric Arteries*; and in Women ad-  
vanced in Years, accusom'd to be infested  
with this Flux, and liable to it upon every  
occasion, such a Flux hastens their Period  
of life: Old and weak Women are apt to  
generate Phlegm, and the Uterus, by fre-  
quent Attacks of this Disorder becomes lax,  
so that it becomes as it were a Sink for this  
Humour, and seldom yields to the best of  
Medicines; and if such Women are more  
oblig'd to use Exercise, it is impossible  
to relieve them, they will never want the  
flux, and must at last melt into an  
Amenorrhoea, which is difficult to take off,  
and true the Observation is let History  
testify. But it is affirm'd, that the *Tartar*-  
Women are very barren, and the Rea-  
son given for this Sterility is, because they  
eat much: Now, it is certain, that if the  
Women in *England* ride much, it gives  
rise to the *Whites*; and we very well know  
by experience, that Women who are  
troubled with this Disease to any Degree,  
become



become barren. It is also Matter of Observation, that the Barbarians of the *Lapland*, who are much accustom'd to labour hard to carry heavy Burthens, are also very barren : And as carrying Burthens with makes Women subject to the *Whites*, the same Reason they should be as barren as the *Tartarians* : It is found by daily Experience, that Men who overstrain themselves by carrying heavy Loads, are held without Flux of Seed or Blood, according to the degree of the Strain ; and it happens from the Weight they carry, which destroys the *Equilibrium* of the Muscles, and relaxes their Fibres, and also all the Vessels run thro' them ; so that if any *Reservoir* be at the Extremities of these Vessels, they also suffer and be relaxed, and so rendered incapable of holding those Liquors entrusted to their Charge. If we consider the Reason of the Stubbornness of this Disease, we should deter Women from this Exercise ; but it is certain, wherever the Glands of this Organ are once thoroughly distorted, become indurated, or too much relaxed, they never yield to Art, and the Excess increases the Danger : Moreover, nothing is more common than for Riders to be afflicted with *Ruptures* ; they who are already afflicted with the Lash, should never ride unarm'd without Trusses ; and methinks, they who are devoted to this Exercise should fore-arm, and

er them before they have Occasion ; for  
vention is by much the easiest side of the  
ction : I believe it wou'd look like a  
adox, to name any one Person, that was  
cur'd of a Rupture by Riding, and  
uld have been drawn in by Head and  
lders for a Precedent, by the Favou-  
of this Exercise ; such an Instance  
ever I was thoroughly acquainted with ;  
Gentleman rode at least sixty, often an  
dred Miles a Week, and was much in-  
ed by this Disorder, as he had been from  
younger Years ; he hated Trusses, and  
therefore always oblig'd and observ'd  
old his Hand upon the Part by the help  
ne Wastband of his Breeches, and un-  
this Toil he rode on for five or six Years  
ether ; but at last he found the stress up-  
the Part to lessen, which it daily did,  
there was no farther Occasion for his  
blesome Posture ; he could even Hunt  
ft, and leap Hedges, without being o-  
d to hold the Part with his Hand, and  
inued well for above ten Years, and  
so still for any thing I know to the  
rary ; but then you are to know that  
hese Advantages were not to be reap'd  
iding ; no, he was always prejudic'd  
; they were owing to his way of living ;  
was a very lean thin Man, and by falling  
good Fellowship, he plump'd up and  
bulky ; to which Accident only he  
ow'd

ow'd this Piece of good Fortune; and may readily be accounted for; because if by his lean Habit the Rings of the Muscles gap'd, they were clos'd up by his growing plump, so that the Intestines could not escape thro' the Processes; and perhaps some Part of the Intestines might grow too inner Part of the *Peritoneum*, as his Blood grew more balsamick. Nor can this Exercise, or any other be suppos'd proper for Women subject to Abortions, 'tis too much to see what *fracas*, what Havock it would make, it would tear off the Afterbirth, it would occasion Bleedings, if not it would rate the Substance of the Womb, it would cause Fevers, it would be an Introducer of Convulsions, A Raving, Swoonings, and Death it self: But the greatest Patrons of this Exercise, are so fool-hardy enough to deny these Consequences, they submit to acknowledge the justification. Nor are Persons subject to drink large Quantities of Water, to be admitted to this Exercise, the Riding moves the Blood and shocks the Fibres, and by a more frequent Irritation concurs with a more violent Motion, the Secretions are generally increas'd; because every Degree of Enlargement of a Vessel, adds a greater Patency, and the Quantities afforded by the different openings, are as the Squares of the Diameters so enlarg'd, so that they

Diam

Diameter as two afforded four Ounces, a  
 Diameter as three would give forth nine  
 ounces in the same Time: This is Fact, and  
 easily demonstrated in the following man-  
 ner. Circles are to each other as the Squares  
 of their Diameters; for we conceive a Circle  
 to be only a regular Polygon of infinite Sides:  
 then a Polygon be inscrib'd, however  
 the Circle exceeds, the Polygon will also  
 exceed: Draw a Triangle within this Po-  
 lygon in the greater, and another within  
 the lesser, these Triangles will be propor-  
 tionable; but the Triangle, and consequent-  
 ly the Polygon of the greater, exceeds  
 the Polygon of the lesser, as the Squares of their  
 homologous Sides; and therefore do the  
 Circles: And this Proportion will always  
 hold good till the Vessels lose their Elasti-  
 city; for then becoming too rigid, or re-  
 sistant, they flag, and grow curv'd, or  
 do not yield to the Fluids at all, and then  
 the proportion is destroy'd.

Persons under *Convulsions*, are preju-  
 dicially affected by Motion; let us take the Case how-  
 ever please, we find Members convuls'd do  
 not become too rigid, and if we allow  
 them to strengthen the Fibres, it is by  
 making them tender; but if they are already  
 tense, Exercise hardens them yet more,  
 and adds to the Convulsion; or if we sup-  
 pose they proceed from too hasty and irre-  
 gular

gular Influx of Spirits into the Nerves, Rides moves all the Fluids briskly, and will introduce, and not calm, Convulsions.

THERE yet remain some Instances in the Divine *Hippocrates*, where Men are firm'd to receive Damage from Riding, that is, it destroys *Virility*; \* for where says he, *Men ride much and very of there very* "many are seiz'd with Disorders from a Defluxion, with Discomfort on the Hips, and Pains on the Feet, become unable to exercise Venery: These Disorders the *Scythians* are infected with, and for these Reasons they are rendered the most unfit of all Mankind for Copulation, both because they always wear Breeches, and because they lead the better Part of their Lives on Horseback, so that they cannot handle their Purses, nor can they have any Appetite by reason of the Cold and Fatigue; nor do they seem to have any thing more at heart than to be depriv'd of their Virility." Which Men who ride much

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\* "Ουκ ἴσ' ἰσπαζοῖται· μάστιγα δὲ συνκτότατα, ἐκ δὲ σπλάγχνων καὶ μαζῶν, καὶ ἰσχιδῶν καὶ σπονδαίων ἀλίσκοιται, λαγνύειν οὐ δύναται. Ταῦτα δὲ τοιοῦτοι Σκύθῃσι πέσσει· καὶ ἑυνοχο εἰδὲς ἀνθρώπων διὰ τὰς πέσσεις, καὶ ὅτι ἀναξυρίδας ἔχουσι, οἷον ἐπὶ τῶν ἵππων τὸ πλεῖστον τὴν χεῖρα, ὥς μὴ χεῖρα αὐτῶν αἰδοῖν, ὥστε τὴν ψυχὴν καὶ τὴν κοίτην ἐπιλαβὼν τὴν ἡμέραν μὴδὲ, καὶ μὴδὲν παρακινεῖν πέσσειν, ἀ' ἀναδ' ἐρῶντα."



experience in our own Country. The  
 ns: for this Imbecility seem to be  
 for first, the *Erectores* and other  
 es, lie between the Horse and the  
 nt of the Rider; and as they ought  
 tense to a certain Degree, this Posi-  
 seems to destroy their Tone; for how  
 possible Muscles should avoid Com-  
 on in Riding, where they are at  
 Jolt, kned as Dough, and are  
 oy at least relax'd far beyond their  
 ary Tention; and moreover Fatigue  
 always the effect of exhaling the Spi-  
 But when Men lose their Spirits, and  
 same time have paralytick Muscles in  
 art necessary for Coition, it is im-  
 le they should act without Materials;  
 as no speaking without a Tongue, nor  
 without Wings. For the other Dis-  
 Hippocrates mentions, they seem to  
 d barely on exposing themselves to  
 ne Colds, and a hanging Posture:  
 Cold coagulates our Fluids by intro-  
 acid Particles into them; and if these  
 are in great plenty, as they must be  
 northern *Tartary*, they tear the So-  
 their Points, and occasion Pains and  
 Defluxions.

HAVING

HAVING nearly sum'm'd up all the  
 vantages and Damages also receiv'd  
 Riding, it remains that we descend to  
 particular Exercises, and recite also  
 and why they do Service or Disservice  
 among them I reckon *Friction*. Among  
 many Things necessary to be known  
 Physician, *Hippocrates* mentions \* *Friction*  
 and promises us in the same Place to  
 of it elsewhere; which, as he never  
 we have Reason to believe we are  
 Possession of all his Works: Be this  
 it may, there are not a few of late  
 who have taken this *Chafing* into Co  
 ration, and have shew'd us what B  
 accrues to us by it: I wish they had  
 taken the Pains to discourage its  
 But it fares with Physick as with  
 Judges, they determine by Favour;  
 uncommon to see Men, who are fa  
 an *Hypothesis*, to say all good Thi  
 what Medicine or Method they are  
 ded to: And altho' little can be said  
 by Experience, if we confine our sel  
 the Truth, yet large *Encomiums* are  
 it; 'tis gilded with fine Titles, the  
 Writers are oblig'd like Glow-worms  
 borrow its Lustre from the Dark.

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\* De. Articularis, Sect. 6.

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It is our Business then to take a View of *Friction*, and consider what it performs in our Bodies; which when we have done, we shall the more surely pass Sentence on its good and bad Effects. When Parts are chaf'd, whether by a warm Hand, or by Leather in Bagnio's, or by a Flesh-brush, or with a Sponge, the *Friction* expels the Humours circulating thro' the skin for a while, but so soon as the force is remov'd, the Parts so rubb'd grow red, plump, and warm; so that *Friction* seems to have an Effect upon the Solids, either in softning them, as we see a gentle Fire softens and relaxes leather, and gentle *Friction* occasions a warmth, and also works upon the Fluids, attenuating those circulating in the skin; or has an Effect of hardning the Solids, and producing Effects suitable to the degree of it?

GALEN reckons up many Advantages arising from it, but he is careful to say more than it deserves; he takes notice of the Damages it does when immoderately used; and if we rightly consider the Affair, we never was any Medicine, or any Method so trifling, but, if it did Good, it would also do Prejudice if abus'd: As Drugs, 'tis certain every Plant, every Mineral, every Animal abounds with some

U

Princi-

Principles to a determin'd Degree; therefore, if any one takes plentifully of a Plant for Example, it will be easy by continuing the use of it to ferret out its Virtues and Harms; however antient this Method has been, it is yet the surest: No one hitherto tho' the most skilful in the *Materia Medica* having refus'd to stoop to these low and antiquated Means, as to the first Step coming at the Vertues of a Medicine; and therefore, as to the Exercise we are speaking of, the same Method shall be observ'd by us: We shall fairly recount to our Readers what it has been found to do and why it does it.

SUCH Persons as lead an unactive Life, whether by Choice or Necessity, trust to the Strength of their Hearts; they may imagine this Organ strong enough to propel and drive forward the Juices to the Extremities, and must believe no Accident of sufficient Energy to resist its Force, if they neglect proper Exercise, when they can conveniently put it in Execution; if they don't supply its Defect by proper Equivalents: If we speak precisely, *Fris* does not fully answer the Ends of strong Exercise; however, it attenuates all the Fluids that take their Course to the Skin, it opens the Pores, and serves many

poses in like manner, as Exercise will do in a less Degree.

Few dream that *Friction* produces contrary Effects on the Solids and Fluids, according to its Degrees, but these Consequences will plainly appear in the Sequel of this Discourse; to which we will subjoin the *Rationale*.

WHENEVER we have a Mind to pump up our Flesh, the Brush us'd moderately Morning and Evening for a small time, presses the Fibres gently, and squeezes their Contents forwards, which, when it is remov'd, the Solids recoil and grow larger, because they yield to the Pressure, and do thereby become capable of receiving more Fluids within their Sections; what is *Nutrition*, but a larger Quantity of Fluids running in the Channels, and plumping them up? This I say we experience upon gentle Brushing; but if Exercise be us'd immoderately, then it opens the Pores, dissolves the Fluids, and wastes them, occasions great Expences of *Friction* thro' the Skin, and the Fibres being thus depriv'd of their usual Contents all begin to shrivel and make us look lean.

IN like manner *Friction* when it is moderate softens the Fibres, because what-



ever calls up the Blood into the Parts gives a warm Moisture to them, which has a property to relax and soften the Solids; but if we proceed in chafing too much, then we cause a great part of this Moisture to exhale thro' the Pores, and we drain the Fibres of their softer Parts and they become hard; and as Diseases often depend upon Relaxations and Contractions, we are shew'd a Method, by which we can relieve either State, as far as is in the Power of *Friction* to effect.

WHATEVER Changes *Frictions* produce in our Bodies, may justly be reduc'd to the following Heads, namely either they promote the Circulation, increase our Heat, dissolve the Fluids, and increase their Velocity, or they soften and harden our Solids; I say these are the original Properties, from whence all other Effects do spring, as will appear in the following Paragraphs.

FRICTION is us'd in *Palsies*, to End the Parts obstructed and relax'd and be again restor'd to their usual Tone, it increases the Velocity of the Fluids in the Part affected, and by Consequence the Nerves obstructed; whither the Spirit is invited by the Chafing, flow with a Swiftness capable to open the obstructed Nerves.

and the Relaxation being a Branch of the Obstruction, gives way also; but if moreover the Parts are permanently relax'd, we are oblig'd to chafe oftner and longer a time; because it has this in common with Exercise, that it exhales the abound-  
ing Humidities, dry's, and so strengthens the Parts; but Care must be taken not to exceed, lest we make the Fibres rigid, and so render them again incapable of receiving any Impressions at all.

IN *Spasms* or Cramps, where the Parts become too tense, by Reason of the Contraction of the Parts, gentle Chafing relaxes the Parts, and this is the occasion of rubbing the Parts in Epileptick, Hysterick, Convulsive Fits; it affects the Fibres, and bends them when they are shrivel'd up, and made uncapable thereby of receiving and distributing Spirits; and moreover 'tis wholesome in these Cases to chafe where the Parts are not contracted, because it invites the Spirits and Blood into another channel, and diverts their Fury from the parts affected, so that it serves by way of revulsion, as well as Evacuation; for the *respirabile* may be increas'd by chafing, and the Retention of this frequently giving Rise to these Symptoms in Persons expos'd to Convulsions, the taking off the original Cause at the time we make a Diversion,

version, serves two grand Purposes, namely it lessens the Quantity of the Cause, and it changes the Bent of the Humours into another and distant Channel; so that the Parts, which at present are overcharg'd are put into a Condition of getting rid of the Weight they groan under, that is no more will run in, after such a Diversion, than can be distributed, and the Nerves do leisurely recoil and recover their due Tention.

IN the *Gout* Frictions are of use, because they dissipate the Humours that stagnate any where, by the Pressure made use of; and as in gouty Persons the Fluxion upon the Joints, of a saltish and viscous Matter obstructs the tender Channels, and frets them into spasmodick Pains, a little Friction attenuates this glary Stuff, and prepares it to pass off by the Pores of each Fibre, and at last by those of the Skin, and does thereby shorten a Fit of the Gout, or at least contributes to alleviate the Vehemence of it: 'Tis true, we find few have so much Rhetorick as to persuade the Sufferers under this salutary Despumation to chase, tho' it be done ever so gently, because they have no Notion of adding Pain to as much Pain as they can already bear; and if Chafing were understood a rude Treatment of the Part, they would be in the right forbe-

forbear it, because this Friction would invite a fresh Influxo Humours into the Joints ; that is, it would give a new Fit, so that the Patients would undergo a double Paroxysm ; but a warm Hand, or a tickling of the Part with a Brush, are hardly felt, and they would only attenuate the Humours nestling in the Joints, without putting the Blood into any Hurry, and would therefore serve only to dissipate the stagnating, and not to invite the flowing Humours: From whence we may gather, that Friction has a double Use in gouty Persons ; namely, it either *dissipates* or *invites* Matter, and may therefore be used both in the Fit, as a dispersing Fomentation, and out of it, as a Revulsive, to draw the Gout resting in our Bowels, to the extreme Parts, which, if it is not much settled and fix'd within, it will effect.

FEW will imagine that hard Friction conduces to put a stop to a Flux of Blood, and yet it is advis'd by all Practitioners for compassing this end: It must be confessed, a large Hæmorrhage is not likely to give way to so slender a Revulsion; which often proves too hard for the greatest Remedies ; but a Bleeding which is moderate, may be assisted by Friction, inasmuch as it calls the Blood another way, as it changes the Motion from the Part affected, to a distant Channel,

nel, so that it shall not be loaden, nor rent into a larger Orifice: Revulsion is a Substraction; by it the Blood, which would flow to any Part, is prevented to arrive at the Orifice, and the Fibres are mov'd into a Trembling or Oscillation in the chafed Part more than usual, and therefore the Blood moves that way more rapidly than usually it did, and forgets its Course, in proportion, to the gaping Orifice. But whilst I am speaking of the Advantages of Chafing in Bleedings, I hope none will take me to be so much a Patron for it, as to postpone better Remedies, I only mention common Practice, and the Reason why Practitioners have advis'd it.

THEY are in use for Night-mar'd Persons where the Blood or Spirits are under viscid State, and where they are too much compress'd, because the Brush apply'd all over the Skin, attenuates all the Blood running in those Channels, which therefore, often us'd, may in time render the whole Mass thin enough, and so hinder from standing still any where, as is certainly the Case in the *Hagridden*, whose Pulse if felt after a Fit, will convince any Unbeliever, for it will be found to intermit frequently: I have above remark'd, that Intermision of the Pulse, and an Oppression on the Heart, do accompany an *Inter-*



; and these Symptoms are *Scions* of an  
struction and Viscidity, and upon the  
Account in a *Catalepsis* hard Rubbing  
a good Effect; the Parts are in this  
to be rubb'd with rough and warm  
baths, which put the Fibres into proper  
rations, and the Humours again into  
tion; so that the Spirits which seem to  
coagulated by some malignant *Aura*,  
to be shut up in the Fibres and Mus-  
in an odd Manner, do begin to mantle  
spread themselves a-fresh into Motion.  
y, in *Apoplexies* themselves we use hard  
ctions with Success in the Extremities,  
ich serve as Revulsives and Attenuants,  
vided the Blood is not extravas'd into the  
tricles of the Brain; in which Case,  
strongest Remedies prove ineffectual;  
are Frictions of any Service here: But  
o is he that knows whether this is re-  
the Case? We have no Signs so univocal  
to discover this Degree of the Disease;  
as all Remedies are to be call'd in Prac-  
which give us promising Views, this  
to be practis'd among the rest: If the  
em of our Fibres have not lost all their  
ne, or all their Function, it is possible  
Unth hard Friction, which is a continual  
it from membrancer, may put them into Vibra-  
that s and Tremblings, and thereby invite  
Oppo tentful Flux of Blood and Spirits to the  
n In ed Parts, and draw off from the loaden  
Organ,

Organ, so large a Quantity, as to enable to recover its Elasticity and Spring, which it will propel the Burden into Mass again, and the Patients may there recover their Sense and Motion. As my Part, I think, we have as much Encouragement to use Frictions as any other promising Applications: Altho' we have leisure to call to Order the Remedies in *Apoplexies*, each being to be us'd soon as thought on, yet this being one the easiest, should be one of the first last too; 'tis not troublesome to the Spectators-by, and gives the Fibres fresh *Memento's* of rousing the sluggish Spirits to their Quarters, and desert those that have too much oppress'd: Neither the Physician or Assistants, ought to neglect postpone any salutary Measures, tho' they don't find much Advantage in them presently. These Persons may justly be compar'd to high-mettled Hawks, who soon grow weary when the Game is not near, but unwearied Diligence accompany'd with Skill, wears the Lawrel.

THESE Frictions are us'd in habitus Vertigoes also; not that these Humors according to the Antients, arise from Wind, and that Friction carries them off, but because the Head is never loaden more than by a Stoppage of Perspiration, and Character

rest

stores this Secretion effectually; which if  
prejudic'd or check'd by the Inclemency of  
the Air, fills all the Channels in Propor-  
tion as it is curb'd; and because some Nerves  
are fuller very badly, because it puts  
them into Tremblings, those of the Eye  
often to be tenderer in some more than  
others, and suffer Damage by the Ob-  
struction: How often have we observ'd  
Persons, otherwise in perfect Health, subject,  
upon any Error committed in their Non-  
naturals, to these Vertigoes? Vomits, Bleed-  
ings, Physick, and Volatiles, do but allevi-  
ate for a while; the least Plenitude, the first  
sunny Day, sitting up a little later than usual,  
indeed a violent Passion, will hurry them  
fresh into all their former Complaints,  
they grow giddy again, and if they desire  
to be reliev'd suddenly, they must again un-  
dergo the same Course they had done be-  
fore: But as no discreet Person would insist  
upon so hazardous a Method, because their  
Nerves would in process of Time thereby  
be wasted; so all such Patients can do, is to  
use Medicines that will strengthen their  
exhausted Nerves, and to forbear every Mea-  
sure they have experienc'd to be prejudicial.  
And if it be enquir'd of me, what is that  
Remedy that will strengthen the Nerves?  
I believe that *Biondi's Pills*, mention'd in  
*Theodore Mayerne*; they are made of  
*Charum Saturnus* and *Turpentine*; the aro-  
matick

matick Particles of the latter will exhale the Humidities relaxing the Nerve, and the Styptick Parts of the former will contract it; so that in process of Time, it may grow tense enough to receive Impressions in a proper manner. Cold-bathing of the Head also will be of use to make all the Fibres of that Part of a due Tension, and Friction by promoting an Evaporation of the watry Parts of the Blood thro' the Pores will lend an assisting Hand to the Work.

WE are now well appriz'd of the Nature of the *Rickets*; they are indeed a Species of a Palsie, where the Nerves are relax'd, and the Parts become emaciated: the Relaxation is an Effect of the Humours being too watry and slimy, and the Atrophy of the Parts depends upon a Defect of Circulation thro' certain Tracts of Fibres. It is remarkable that Children labouring with this Disease, have their Heads larger than usual, and are endu'd also with a larger share of Sense, whilst they are thin and meagre elsewhere, and are weak as hardly to be able either to manage their Feet, or to stand. The Head is well provided with Juices, but the Back is not, and all the Nerves issuing from thence, are relax'd if not obstructed: In this Case Practice has found Frictions useful. He who on this Point Dr. *Glisson*, Friction, says

also be referr'd to manly Exercifes, in its own manner; not indeed with Refpect to an active Motion in the Child requir'd for its Adminiftration, becaufe it is done by the Nurfe and not the Child, but by reason of a like Force and Efficacy as has in the Cure of this Difafe. And Friction feems to be of a double Nature, and partly belongs to Exercife, partly to the nature of Applications, upon which account we have referv'd it for this Place, that it might conclude the kinds of Exercife, and immediately precede Applications. It is to be us'd, in Winter efpecially, before a plentiful Fire, the Child being well guarded from the Injury of the Air. Some Nurfes perform this Friction with a *warm Hand*, others with Cloaths wring'd and warm'd, others with Flannel, and others with a *Flefh-Brush*. Some indeed praife the Brush much, and prefer it to all other Methods, but fince it is of very little Confequence how it is done, we approve of all, and fo leave it to the Nurfes Choice. But let them begin this Friction from the Spine of the Back, placing the Body of the Child with its face downwards, and let them move the hand on all Sides, upwards, downward, and sideways; then let them rub the Buttocks, Thighs, Calves, Ancles, and Soles of the Feet; then again, placing them on their



their Backs, let them rub their Breasts and Belly, taking care not to rub the Parts where the Bones jutt out, but only their hollow Parts very freely. Nor is this Action to be continu'd longer, till it gives a gentle Redness, lest the natural Heat shou'd rather be dispers'd than rais'd. This Sort of Exercise, agrees chiefly with weaker Children, and with such as cannot walk or exercise themselves; for it supplies Exercise, and serves to raise a Heat in the Body, and to distribute Nourishment to all the Parts. However, it must be granted that *Chafing* allures much Nourishment and Heat to the muscular Parts than to the Fibres of the Skin, than Exercise properly so call'd, and therefore it gives way in Dignity and Value to true Exercises; thus far the ingenious *Glisson* in his Treatise of the Rickets, 406, 407, 408. And altho' this Gentleman wrote his Book in the Infancy of the Circulation, yet he gives us plausible Reasons for this Operation. The Circulation of the Blood, says he, is slow, and less than and more slimy then is requisite, so that the vital Heat becomes feeble. Modern Practice allows his Reasons, and Friction is built upon a solid Foundation; for by exhaling the Humidities, with which the Fibres and Nerves of the Back abound, if putting them into tremulous Motion, which

which the pleasing Friction does, being  
the running our Fingers over Musical  
strings to make them give out Sound, and  
inviting a more plentiful Influx of Blood  
and Spirits into the Parts, can prove effi-  
cacious in Obstructions, Friction bids fair  
for helping them on their Road towards  
cure.

WHEREVER Persons upon catching Cold,  
are subject to *Headachs*, the Parts being  
obstructed, the Matter of Perspiration is  
impeded in its Passage, and fills the Vessels  
too full; and as few have so exact a  
structure of Parts, as to be every where  
like well fram'd, it will follow that  
some will be troubled with Headachs,  
others with Pleurifies, and others with  
Rheumes upon Colds; not but that it is  
the same Matter which occasions all these  
 Disorders, but the Vessels of some are  
looser or tighter in one part of their Bodies  
than in any other, and therefore a deter-  
minate Fulness will affect these People ac-  
cording to their peculiar Structure. I know  
no readier way to account for Persons  
being so habitually afflicted with certain  
 Diseases upon Debauches, or Cold, than  
the peculiar Frame of some Parts: This  
is what we experience daily; we meet  
with habitual Diseases, and are consulted  
about their Prevention, but I don't know  
that

that sufficient Provision has been made about this Affair, wherefore I shall give a short View of it, and give Directions how to proceed in such Cases. The Intentions of Cure, and therefore of Prevention, are to unload the Vessels to their ordinary Size and Fulness, which is to be guess'd at by alleviation, by Bleeding, Physick, Emeticks, or Diaphoreticks, among which I reckon *Friction*; and to soften or harden the Part affected, by Fomentations, or Unguents, or Internals; thus we cure, and in order to prevent these occasional Diseases, we must keep the Body empty by Fasting, Exercise, or Evacuations, and must apply the same Externals, as we wou'd in the Disease, if present. So that Friction has its use in Headaches in promoting a more plentiful insensible Evacuation; it is therefore to be made use of, till it has depleted the Vessels to their determinate Pitch, but as very few will be so patient as to expect or wait for good Effects, because they are of the Opinion, that nothing can serve their turn which does not act like a Charm, so they have recourse to letting of Blood frequently and bring on a weakness of Constitution; whereas, if they cou'd set up contentment to bear their Pain with Patience for a while and apply strenuously to Chafing, it would answer their Ends effectually, and the

ight preserve themselves hail and strong.  
don't however speak of Headachs, which  
reaten sudden Danger, and which re-  
ire therefore a quick Depletion of the  
essels; because if these were not sudden-  
reliev'd, we must expect Lethargies,  
even Apoplexies to ensue their Neglect;  
I speak of those Headachs common  
d habitual to Women and tender Peo-  
upon catching of Cold: They allow us  
e to look about us; and in them  
ction, on the Part principally, but also  
er the whole Body, will be of great  
vice and Benefit.

We find *them* also recommended in Hy-  
rical and Hypochondriacal Patients, who  
plump and fat, and who cannot use  
ercise: If Perspiration goes forward in  
regular Manner, many Diseases are pre-  
ted, or at least many of them when  
ted are made tolerable by it, because  
least Excess of Fulness in our Vessels  
s some People upon the Rack: No  
eases vary their Shapes more than *these*,  
n Pains they wander on a sudden  
Convulsions; from Convulsions they  
rn to Colicks, and from Colicks  
haps to a *Delirium*; they are never  
same for an Hour together, never did  
Moon change its Figure, or *Proteus*  
Shape, oftner than *these* their Symp-  
X toms;

toms; and as a Stoppage of Perspiration or however a more sparing Secretion that Matter give Rise to many of the Ailments, by adding fresh Fuel to the fermenting Blood, Friction may also be Service to such People, if they throw into the Scales with other proper Spicks against these lasting and tormenting Diseases; and Custom now prevails in Hysterick Fits to chase the extream Parts, cause it invites the Blood thither, gently relaxes the Fibres, and thereby bends the whole System of the Nerves. That Perspiration, when obstructed, is the Occasion of these Diseases, will appear from the nature of the Matter of it, which is *saline, oleous and watry*, as *Bellini* says, but these are the very Principles inducing Struggles in our Mass of Blood. No wonder then Hysterick Women suffer under such a Retention, when their Nerves are already highly disposed to Contractions. There can be no other Principles within us, than these mentioned, and as these Salts exceed the oleous Part, they shrivel up the Nerves, and render them dry and rigid, or at least so that the least twinge puts them into Action, that is, into Contractions. Take a narrow View of these Patients, and we shall easily perceive the Blood alone cannot give Rise to their Symptoms; for how can



parcel of Matter, lodg'd in, or circulating thro' the Veſſels of the Head, for Example, give Pain inſtantly in the Breſt or Bowels? But ſuppoſing a Contraction of its Cauſe, 'tis eaſy to ſee that one Nerve running in Caſts to various Parts, may be drawn up, and bring its whole bundle into the ſame Condition in an Inſtant; and the different Parts, to which this Nerve runs, may be affected in a Moment.

THIS Exerciſe is commended in *Nervous Rheumatism*, and more eſpecially *ſcorbutick* ones; few make a Diſtinction between theſe two, but they differ widely in their Symptoms, altho' the former ſometimes ſucceed the latter: When the Blood has been habitually tainted with a Scurvy, the Spirits become of the ſame Stamp, then the Nerves ſuffer in Proportion: In the *ſcorbutick Rheumatism*, the Pains move from place to place without any ſwelling, and they are increas'd by Night; in the *Nervous*, the Pains, how long ſoever, are yet accompany'd with Convulſions in the Tendons, eſpecially in the Wriſt; they are Periodical, but do not always infeſt the Patients at Nights: They differ in Degrees, and in the Seat of the Diſorder; and therefore they require ſome different Meaſures; but as to

the Chafing, it contributes to exhale part of the Salts introducing either of them by opening the Pores, and moreover softens the Fibres and unbends their Contractions. I have been inform'd of a physical Method of relieving a flying Rheumatism, which was not attended with Fever, namely, by stoving the Sheets with a Warming Pan, in which, *Myrrh*, *Olibanum*, *Lubdanum*, and other Gums containing volatile Parts, were mixt and throw upon the live Coals, and putting the Patients into them whilst yet warm: The Steams of these entred their Pores, so to evaporate the Humours and give Relief: However trifling this Method may appear, it has its Foundation on Reason and acts in part as Chafing would. And this same Friction is found to be useful in the true Rheumatisms at the decline of the Fever; for then as has been ready observ'd, the Water settles, and the Humours are digested enough, and rendered passable thro' the minutest Pores; and in Consequence, Friction will encourage the Tendency of the Matter towards that Part, namely, the Skin, which is the most convenient for its Extermination.

\*GALEN observes to us, that Friction relieves periodical Pains, if we chafe the Parts two or three Hours before we expect them; because, says he, it diverts the Fluxion on the Part, and renders it capable of receiving Damage; but this does not hold good, for the ready way to draw Humours to the Parts is to use Frictions; as they are a *passive Exercise*, they invite a Flux of Humours to the Parts; therefore we must find out another *rationale* for this Advantage accruing to Friction in Pains, this not serving our Turn; if we consider that the Seat of periodical Pains never resides in the Part affected, as to the † *Causa mandans*, but as to the *ill Conformation* of the Part receiving; we may then see that the Friction, by opening the Pores, by softening the Fibres, and by exhaling part of the Fluids thro' the Pores, prevents that Congestion or Rarefaction, or some other Cause, from whence those Pains originally arise; and therefore *It* serves at once as an Evacuant and a Diversion, by which the Humours are both put into

† *de Sanitate tuenda*. † The Cause from whence the Humours are deriv'd to the Part affected, for Example, the Heart or Nerves, &c. Fulnesses, &c.

the Condition of flying off, and the Pain is also fitted for its Reception, without the Danger of being put into Spasms which they wou'd surely be, if we did not thus prepare them. Whether Friction alone will always answer the Point, is more than a Question; for since the Periods are always found to depend on the Accesses of Fevers, the Bark of Peru, and a sufficient Evacuation of the Humours, bids the fairest for taking them off Medically; however, I have found this Medicine fail me in a periodical Nervous Pain, and in that Pain, which the Professor *Michael* terms the *status furiosus*; In the former *Opiates* had the greatest Share, in the latter *Chalybeates* did the *Opiates* from an Idiosyncrasy, having a repeated Tryal, at the earnest Request of the Patient, dispos'd her to a Palsy. I am certain that Blood thoroughly deprav'd, but yet producing periodical Pains, sometimes eludes the force of the Bark, if the Blood is a Mine full of Destruction, the Bark can't enter it, nor consequently conquer it, till part is emptied, and the Blood is chang'd, and then it ceases without the Assistance of this Drug: 'Tis in vain to give *Elogium's* to Medicines by their Deserts, Physicians shou'd avoid Conjectures; they shou'd tell Facts, and leave it to Time to find out the Reason.

IF we consider the various Causes of *Lassitudes*, we shall find why Friction proves Relief to them. We have already observ'd, that Chafing, as it is us'd, may either harden or soften the Skin; and that it may either diminish the Quantity, or invite more humours to the Parts chaf'd; we are to consider now what *Lassitude* is, whether occasion'd by Exercise or Diseases: We will, if you please, take Notice of some Diseases generally accompany'd with *Lassitudes*, and from what Causes they proceed; of this kind is a Jaundice, where the Bile is blended with the Blood; and, as it is gross and viscid in this Obstruction, both the Spirits and Blood will be of the same Nature, that is, gross; and on such an Occasion, this viscosity will hinder the Secretion of Spirits, so that few will arrive at the Muscles; and therefore we will find an Impotence to Motion, and the Parts will be loaded with the contents of a gross Nature; so that the Muscles will be full, and feel weighty; and therefore they have a Weariness upon them. In the cold and sour Scurvy, they complain of a Weariness of their Joints; there is a Stiffness, because they feel heavy; the humours are gross, because the Acid coagulates the Oils of the Blood; there is therefore a sort of Stagnation, or at least a Diminution of Circulation, depending on the Quantity



tity, and the Viscosity of the Juices: There are few Spirits secreted, and therefore the Muscles are ill supply'd for Motion, and the Weight of their Joints is an Argument of Matter stagnating and gravitating, which gives us the Idea of Weight. Hyfterick Women often complain of Weariness, their Blood is sour, and their Spirits are few: this is the Case, and the Hyfterick Cordial so often prescrib'd for raising the Pulse convince us it is, then they can't flow into the Fibres sufficiently, and therefore they feel an Inagility, or, in other Words, Weariness. But the greatest Instance of Weariness we have is in Fevers, whether high or low; in the high the Blood boils and blows up every Fibre to a full Stretch, there are Spirits enough afforded from the a Blood, and yet they are weary and verish all over them; so that the Case may not be a Scarcity of Spirits, but a Compression of the Nerves; the Blood-vessels are full and so are the Nerves, but the Fibres being over-stretch'd press upon the Nerves, and hinder a sufficient Quantity from flowing into them, and by consequence deprive the Muscles of their Supply, and make them unable to move, and this creates an unwillingness. From this short View we may know, why Friction will be useful in Weariness; namely, because in a Pressure it takes Part and unloads the Burden, and

beca

## Sickness and Health, &c. 313

because in an Obstruction it opens the Parts, and invites an Influx of Spirits: so that in Consumption the Friction should be much, but in an Obstruction, moderate; or it is easy to understand, that moderate friction only invites Humours to flow to a Part, but that hard Friction not only invites them thither, but also exhales them; so that a *Momentum* added to stagnating Humours, opens Obstructions; and any Discharge empties a Plenitude, from which two Causes Lassitudes proceed.

I have shew'd above, that Chafing was us'd in sleepy Disorders; I shall now take Notice of a different Effect of it, namely, that it will occasion \* Sleep, if it be us'd pretty much. I have observ'd above, that Sleep depends upon a determin'd Degree of Motion thro' the Tubes of the Brain, below which we feel weak and feeble, and beyond which we are restless, and run into Madness sometimes: If then the Blood runs vigorously on through the Vessels of the Brain, Patients will complain of restless Nights, the Spirits will be generated in too great Measure, and their Motion or Velocity will bear an exact Proportion with their Quantity; so that the little Bundles of Nerves will be stretch'd

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\* *Galen, De Methodo medendi. L. 12.*

greatly,

greatly, and their Contents will be hurried forward, and will continually keep the Nerves in a tremulous Condition, which will excite Ideas suitable to their Motion and will keep us awake: If any Method could be contriv'd to determine their Being to another Goal, and to make the Spirits run plentifully to our extreme Parts, probably the Brain might be drain'd thro' the Passage, and might be unloaded to such a Pitch as would render their Motion thro' the Brain calm and sedate, then Sleep might ensue: But Friction bids fair to answer this End, if us'd with Freedom, because then it proves a *Divertive*, and draws off Humour from the Brain to the Parts so roughly chafed, that it lessens the Quantity, and that calms the Velocity of the Fluids in the Nerves, so that Sleep often ensues. When Opiates are contraindicated and Sleep is requir'd, Friction ought to be attempted as a *Succedaneum* for them; they will serve the Turn more safely than the *Epithema* us'd upon such an Occasion to the Forehead which act univocally with *Opium* administered Internally, and may therefore include Danger: So that Friction is good to drive off Sleep, or procure it, in the following Manner, namely, when the Brain, in Sleep Diseases is overcharg'd, and the Tubes of it cease to be elastick from this Load lying upon them, and stretching them by

beyond their natural Tone. Friction invites the Flux of Humours from this Organ to the Parts chaf'd, and so soon as the Head is discharg'd of a certain Quantity, the Fibres return to their Office of Contraction and Dilatation, and do greatly contribute to propel our Fluids in their proper Course, upon which a due Motion is kept on foot, and then they awake out of their Doze; whereas, if the Fluids run on too briskly, and keep us in a watching Condition, the Friction, by abating the Quantity, also abates this Swiftness, and this again brings us to Sleep; so that as we observ'd above, it is the State of Motion of our Spirits, that governs Sleep, which, if too great, keeps us awake; but, if too slow, whether from an Oppression or a Scarcity, we fall asleep.

WHOEVER indulge in drinking excessively, ought to chafe next Morning, or as soon as they awake; because Excesses heap up Humidities, which being retain'd within us, occasion Plenitudes, and those introduce Numbers of Diseases: If we don't exercise, or our Affairs don't permit us, Brushing is a Supply and serves to draw off those abundant Humours thro' the Pores; which, if they rested within us, would overwhelm us; but this Friction must be lightly done, because Evacuation is requir'd



quir'd, as the only adequate Remedy for  
Plenitudes.

**FRICTION** is also commended in a *Ganglion*, because that Disorder depends upon an Obstruction, or a Viscidity lodg'd in certain Tracts of the Tendons, which readily betrays it self, by moving it; for the Tumor will not move upwards or downwards, but sideways, and is in some Measure transparent, or however, of the same Colour with the Skin; it yields upon hard Pressure, and rebounds quickly: Common Methods are too weak to break this glutinous Humour; it is stubborn, and therefore Friction or rather Percussion, is call'd in Practice, to attenuate the gluish Particles, and to remand them with some Force into the Channels, which have been so long obstructed. I have known a Tumor of this kind, of long standing, sink in an Instant, by a sudden Sprain, by which the Hand was jerk'd and stretch'd; and if we take a View into the Nature of such a Tumor, 'tis easy to conceive that some Fibres of a Tendon may be obstructed, while the rest are free; and after the Manner of other Swellings, the Tubes thus obstructed enlarge their Dominions, and seem to frame a common *Cystis* or Bag to themselves, in which the Humours reside; so soon as the Point of Impediment gives Way,



ay, whether by a Blow or gentle Friction, the Blood presses on the Humour, and then the Tumor begins to slide.

FROM the Principles hitherto settled, it appears, as I have already hinted, that immoderate Friction will bring on an Atrophy, as surely as the moderate will plump; because, as all Evacuations continu'd for Length of Time must drain a Body, the Repairs don't bear a greater Proportion than the Consumption, so Friction indiscreetly us'd, will make Persons weak, and render them liable to all the Consequences of a natural *Marasmus* or wasting; that is, it will impair their Flesh, take off their Spirits, flatten their Stomachs, render them stupid and unactive, deprive them of Virility, occasion a Sterility, throw them into Convulsions, bring on \* *Tetanus*, *Cæliac Passions*, *Hiccups*, *Tetanus*'s, and many more terrible Disorders; for as *Mesue*, in his Aphorisms, observes, † *Diseases arising from a Deficiency*

#### Particular Atrophies.

*Morbi qui oriuntur a Defectu Quantitatis, haud  
distant a Morbis, qui oriuntur ex earundem abun-*  
*dia; ideoque peccant Medici celeri accessu suo ad Fur-*

ency

ency of Quantity, are not fewer than those Diseases which spring from an abundance of the same; and therefore Physicians offend by having recourse to Physic too suddenly, as is too common with the better Part of the Faculty.

HAVING recounted several Advantages, well as Inconveniencies attending Friction, it is high time for me to take Notice how long it ought to be continu'd; and, as to Diseases it is found of Benefit for, and the experience it prejudices, are different in the Causes, so there are certain Limits, it ought not to exceed; In general, where Humours are to be invited only to the Skin, and the Fibres of the Skin are to be soften'd, gentle Chafing will answer these Purposes, which is to be continu'd till the Flesh grows red and swells or plumps up: But on the other Hand, where we would evacuate Humours or harden the Skin, we must chafe till the Redness and Plumpness fall again; and it is to be remark'd, that any Friction whatever, gentle or hard, serves as a Revulsive, but it should be consider'd in a true Light; if we are only oblig'd to invite Humours to the extreme Parts, gentle Friction serves the turn; but if we are also to evacuate them, the Parts must be roundly chafed. And as a sufficient Account has been given of these Effects in the foregoing Pages

shall pass on to another sort of Exercise mention'd by Authors of the first Rank.

THE various sorts of *Baths* come under the Notion of Exercise, inasmuch as they are voluntary Changes from one *Medium* into another, by which the Fibres are variously agitated or exercis'd : The Pressure, and the Heat or Cold of Water differs hugely from those Properties in the Air ; and when Patients do hastily plunge themselves into Water, the Fibres receive sudden Shocks thereby, which must of course change the Velocity of the Blood and Fluids instantaneously ; and all those Alterations which can be effected by the change of Velocity, must ensue, which are in Truth, very numerous : The Vessels had need to be very sound to bear so sudden Changes in their Vibrations, and so quick an Alteration in the Motion ; which if they are not, they must be split in many Places, and must bring on Hæmorrhages, or other Fluxes proportion'd to the Vessels broken : It behoves the Physician to consider the State of the Fluids and Solids nicely, before he advises Patients to Bathe ; 'twas his Indiscretion, which, at the reviving of the Cold Bath, brought a sort of Disgrace upon it ; many out of Curiosity, and others being out of hopes of Recovery by other Means, ventur'd into the Cold Bath at all Hazards,

Hazards, and accordingly they suffer'd for their Indiscretion; it was cry'd up as a *Panacea*, and no Disease could withstand its Force; but being instructed by many Mistakes that it only serv'd some Purposes, the fondness of it abated, and at last People have dwindled almost into a total neglect of it. So that it fares with Physick, as with our Cloaths, we change Fashions, as if Modes were only to be follow'd, and Indications were to pass for nothing. How great pity is it, that any Man of Skill should lie under the Misfortune of ill Success; there will not be wanting some, who will impute it to a neglect of some modish Discipline, for which perhaps there was not the least Call; but *malitia Medicorum pessima*, if the Patient of any one Physician is not concern'd in a *Junto*, chances to drop, it must be the fault of the Physician employ'd, and not the Disease: These little Arts serve only for Recriminations, and for abating the Credit of Physick in general. *Dipping* in cold Water was all along practis'd in some Counties of *England*, and many found great Advantage by it, but few took the Natural Causes into Consideration; they attributed it to such Reasons as confin'd the *Bathers* to certain *Wells*; if the natural Properties of Water could have their Effects no where else, or as if these Properties were not natural to cold Water.

Water: If any extraordinary Effects have been found accruing from the use of such cold Baths which are not accountable for any Reason, I readily assent to what other Cause any one would expect to assign for it.

THE common Effects of cold Bathing are, that it dissolves the Blood; it shakes off any Viscidity adhering to the Walls of the Fibres; it purges the Glands, increases the celerity of the Fluids, drives forth Urine, and removes Obstructions, contracts our Fibres, and promotes all our Secretions; but then it is never to be us'd in internal Ulcers, and in weak Bowels, infected with Inflammations, or other grievous Disorders: Therefore it relieves Madness, Headachs, Inflammations of the Eyes when they decline, Hydrophobia, leprous Eruptions, Watchings, Spleenicks, Epilepsies, and Stupors, but is never to be us'd in the Vigour of Inflammations, in Consumptions, Scirrhus's, and other obstinate Diseases; because the Fibres are much compress'd and contracted into a narrower Compass, and the Fluids will then move faster, as the Channels they are contained in are straiter; the Computation of the Pressure is different as the Depths differ; but in dipping, the Body suffers different Pressures: The Head being a Foot under Water, if it be of six Inches Diameter, the Feet six Inches deep, suffers a Pressure proportional

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tional to its Surface and the Depth ; that is, it has a Weight upon it equal to 7 Pound ; but the Feet, being perhaps five Foot under Water, suffer a Pressure equal to 410 Pounds, according to their Surface and Depth of Water : From whence it may easily be guess'd what Posture is to be observ'd in plunging ; for if we would have one Part more press'd than another we ought to place that Part lowest in the Water : So that to order Dipping without observing this Caution, is as unreasonable, as to refuse it when necessary ; we are sure some Parts are weaker than others and 'tis certain if greater Pressure be necessary any where, 'tis on the weakest Part and therefore ought they to be plac'd lowest. *Galen* tells us, " That Immersion in cold Water gives Appetite, and helps Concoction, quenches Thirst, and Men may Exercise the Day after with a better Habit ; the Bulk indeed will be the same as before, but more compact, more muscular, and more lively, and the Skin harder and denser" : He there also assigns Bounds we should not exceed in Bathing. " If, says he, the Persons bathing and coming out of the Water, become soon highly colour'd by Friction, 'tis a sign they have staid in a moderate Space ; but if the Colour is long a coming and returns slowly by Friction, they have staid in

long; wherefore, says he, you will learn the Measure of Bathing from the Skin." This is well observ'd; but as we know a Minute or two sufficient to do those great Effects above-mention'd, when our Design is to accelerate the Blood's Motion, and to return the due Elasticity to our Fibres, so we seldom advise them to stay longer in at a time, continuing the Dipping for a Week or Fortnight in the Summer especially, and emptying the Vessels before we attempt it. We know many, who have a mind to harden themselves so as to bear all Weathers and any Severities of Cold, plunge also in the Winter Season, and with good Success: and I knew one Gentleman, who was extremely hypochondriacal, that us'd to break the Ice to plunge himself, and found Relief of his Disorder by so doing; but then, as the above-nam'd Author well observes, we should begin in Summer, if we design to plunge in Winter; *Tempus autem ad id commodum, est æstatis initium, ut ante hiemem, toto interposito tempore consuetudo nimè spernenda inducatur.* 'Twere hard-possible otherwise to accustom ourselves to it; nay, it would hurry on Fevers, and other Disorders; I have known some ten-ty People thrown into Fevers by bathing

in the Summer Season, and if we suspect such a Constitution, 'twere advisable to accustom them to sponge themselves in different Parts of their Bodies at different times with cold Water, before we plung'd them over Head.

THE *Hot Bath* is also found convenient for many Diseases, as Writers have shew'd us; they also act by their *Weight* and *Warmth*; the Weight compresses the Fibres and returns their Elasticity, but the Warmth dissolves the coagulated Fluids. 'Tis' observable, that Warmth, according to its Degrees, has different Effects upon our Solids; for a gentle Warmth relaxes them, while a violent Heat crispsates them, and as it is the Property of the Cold Bath to make the Fibres tense and rigid, so it is a Property of the Hot Bath to relax, make them tense or rigid the Fibres every where we see how readily the Stomachs of Temperate Pers relax'd by drinking too much Malicious Liquors, are restor'd by drinking the Bath Waters very warm; and on the other hand, we know that Bath Waters us'd externally luke-warm will relax the Parts; for Persons who have by Riding hard become tir'd, are recover'd by bathing in warm Water. So that very different Effects are produ'd by a various use of the same Material; and this is also good in all Liquors drunk warm or

Tea and Coffee not excepted; Fomentations themselves which are emollient, if apply'd very hot, serve also as Discutients; their soft, smooth and oily Particles relax much, their fiery Parts attenuate, but when Humours are attenuated, and Fibres relax'd, the Fluids are shov'd forward by the force of the Circulation; if the Fire contain'd in these Fomentations be excessive, and oily Parts retain a great deal of it, they are not at all emollient, the Heat being superior in Force to the Effects of the Oils. This Caution ought to be observ'd by the Surgeons, who have Occasion to apply them daily for the Dispersion of hard Tumors.

To recite the Advantages reap'd from, and the Damages done by, Bath Waters, would be too tedious a Task for these Sheets, those Affairs being well handled by Writers on them; however, it will not be taken amiss, if I recount to the Reader in a transitory View, what we must expect from Bathing, or the external use of them principally. In Disorders of the Lungs externally us'd, they are often prejudicial; and particularly in the Fit of *Asthma* Bathing is hurtful, because it hastens forward the Motion of the Blood, and in this Case the Blood is already too much mov'd, or however in habitual *Asthma's*, the Vessels and Pipes are com-

press'd by Tubercle's and other Faults of the Solids, and can therefore at no time circulate the Blood freely enough, much less can the Vessels bear a greater Proportion than they usually do, which they must by Bathing. Patients subject to *Spitting of Blood* cannot bear Bathing, because the least Augmentations of Blood open Vessels afresh, and bring on Bleedings: Neither are they proper in Consumptions, which are Glands inflam'd and ulcerated; the Blood in beginning Inflammations shou'd be dissolv'd and attenuated indeed, but not by Medicines, which add a hurry to our Blood, such as we are sure Bathing wou'd effectually do. They who are of a costive Constitution shou'd forbear Bathing, because if we increase Perspiration too much, we lessen other Secretions in proportion; the Muscles therefore of the Intestines wou'd grow dry, and the Excrements wou'd be glutinous and fast to them, and we shou'd then advance Costiveness into the iliac Passages, it self, and at last into Inflammations and Gangrenes.

HOWEVER where the Blood and Spirits want Warmth and Motion, as they do in several Diseases, Bathing comes in play; *Pumping* in fixt Pains is daily practis'd with success at *Bath*; the ex-



ing Warmth attenuates and dissolves the Humours, which have rested long upon the Part, and puts the Fibres into such effectual Oscillations, as sets them a packing into the Mass, which ought not to rest like Levain, there to corrupt the remaining Mass, but Purgatives and proper Alteratives ought to accompany this Pumping to throw them out with all convenient Haste. Paralyticks have found Relief in Bathing, and it happens, because the Nerves being relax'd and obstructed, are put into Tremblings and Vibrations afresh. Nothing can more effectually shake off an adhering Viscid, than the Motion of a Vessel; and as the Warmth dissolves the Fluid, it also gives a proper Shock to the Nerves, and shoves on the stagnant Matter, and they begin afresh to execute their Function. In Contractions of the Limbs, where the Joints become inflexible by a strong compaction of Humours, which by length of Time have grown tough and dry, and have thereby stiffen'd all the Tendons, and shrivell'd them up to a great Degree, it is found that Bathing by thinning the Juices, by making the Fibres capable of standing the Parts which had taken up their residence there, into the Mass of Blood again, and by enlarging their Dimensions every way, has given such Relief, that

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many of them have left their Crutches behind them as Monuments. Bathing also is found of use in the Whites, because they are an Effect of relax'd Glands spuing out a Quantity of Liquor proportion'd to their Orifices; and after proper Means us'd internally, plunging in the Bath Water as warm as they can bear it, contributes to draw a Flux of Humours to the Pores of the Skin, and diverts of Course a Flux to the *Uterus*; and moreover it warms a *Fetus* crispates the Fibres of the *Uterus* with its Glands, and relieves their Flagginess, and furthers a Cure: In a Stone of the Kidneys, a *Semicupium* of Bath Waters serves to relax the Ureters, and to make them give way to the Stone; if common Water warm'd, or if boil'd with Emollients, have been found useful in such a Case, well may Bath Waters relieve but here it must be remember'd, that *Inseffus* shou'd be too hot in the Stone for fear of crispating those Fibres, we design to enlarge. I have often succeeded in very large Stones, by making the Patient sit up to the Waste in an emollient Bath, and by giving internally some Drops of the Tincture of Cantharides in proper Liquids; the Bath relax'd the Passages, and the Diuretick Tincture push'd the Stone down, which was all that was required. Windy Colicks and Wind in the Stomach

assisted by Bathing, as warming takes up the Flatulency of Liquors, the Heat raises up the Viscosities in which the Wind is dig'd, and evaporates it; so that such Persons are observ'd to void it by the Mouth and Anus; However a *Medium* must be observ'd in Bathing, lest we evaporate too much and thicken the Humours. Those white Swellings on the Joints cur'd by pumping, are a fair Proof that the Bath sculps and contracts the Fibres, and their relaxing contracted Limbs, shews they do relax: However these different Effects don't depend only upon their opening Obstructions, but upon the different Warmths of the Bath, which we have already observ'd, contract or relax, as the Heat exceeds, or is moderate. We find Bathing commended for the *Rickets*, and as they are a Species of Palsy, 'tis easy to know, by what is already said, how it relieves such Children: It also relieves leprous Cases, by washing the Salts from the Skin, by rectifying the Pores, or by closing up the gaping Orifices of them; and I remember \* *Crauw* relates a particular History of himself, how Parts may be injur'd, and yet the blood be safe: He tells us, that this Ferment is not greatly communicated to the

\* Dissert. Physico-med. de Homine p. m. 359.

Blood, while all things go well with scabb'd Persons, but it remains in the Humour circulating thro' the Parts: Hence also comes to pass, that it is more easily and sooner cur'd by external Remedies, than any Internals, with which they perplex the Patients, and yet avail nothing with their Decoctions, Julaps, Apozems, and the like.

" I have, says he, a fair Example of this  
 " Affair in myself. When by Misfortune  
 " I lay with a scabb'd Bedfellow in my Travels,  
 " by Infection I became also scabb'd  
 " and went to *Utrecht*, and committed myself  
 " self to the care of a certain Professor  
 " who boasted how many he had cur'd  
 " a short time, which however prov'd false  
 " in myself; for when he had prescribed  
 " divers Decoctions and many Apozems  
 " and such-like, without any Advantage  
 " neither could he cure my Disorder; and  
 " when I had staid there for half a Year  
 " I betook myself to *Leyden* for my Studies  
 " dies, and went a swimming with my  
 " School-fellows in the Sea, and was cured  
 " insensibly by the Sea-salt rushing in  
 " the Pores of my Body, which it fortu-  
 " nately disposes and fits, that the inter-  
 " salt sticking to the Pores may pass out  
 " and thus I was deliver'd I know not how.  
 " How far the Blood of Leprous Persons  
 " may be deprav'd 'tis hard to guess; but

the Humours be thrown out of the Blood by a *Translation*, there will not much be contain'd within, that is not breeding from time to time; for let us consider the Nature of a leprous Eruption, the Humours at certain Periods break forth, turn red and swell, and at last scab and scale off; in many there is a considerable Interval, when there are no Scabs at all upon the Parts; for some I have known who have had Monthly Eruptions, others Quarterly, and others who only had them once in half a year; and others again I have known cur'd by Fits of the Gout: So soon as the Translation is made, the Blood is free for a while; and a Repulsion of leprous Eruptions is very dangerous; as I experienc'd in an old Matron, who at all Hazards, desired me to repel them, because they occasion'd so intolerable an Itching, that she protested she neither could nor would bear: As soon as her Desire was fulfill'd, I was call'd upon to relieve her of an Inflammation of her Kidney, which when I had done, by frequent Bleeding, she rested contented of her Error: 'Tis certain that all Men have greater Discharges at some Seasons than others; and *Sancitorius* in his 10th Aphorism, tells us, that even Men, living a moderate Diet, grow heavier every Month by a Pound or two, and that they return at the end of the Month to their usual



usual Weight, by making more Water than commonly. And Aphorism 66th, Before this menstrual Flux by Urine they feel heaviness in their Heads, and an universal Lassitude. 'Tis very natural to suppose that a Suppression of this Monthly Evacuation may give the first rise to such Eruptions, and which take up the place of much Urine, or of this Heaviness and Lassitude; and once the Blood finds a Passage for throwing the Load off by the Skin, it becomes a constant Sink for the Humours ever after: Whatever therefore takes off the Scabs and supples the Skin, as to promote Perspiration duly, may prevent the Eruptions, and Bathing is found to have this Effect in many, where the Case is not so inveterate, that the rectifying the secretory Ducts is become impracticable. Bathing is practis'd to prevent Menstrual Carriages, because a Weakness of the nervous and membranous Parts is brac'd by the great Warmth in the Waters, and the styptick Particles in them; so that tho' it does not touch the uterus, yet by bracing up the other Nerves and Membranes, this Part will also be brought to the same State, and be render'd capable to sustain a Burden much better. If there are good in fix'd Pains, they are also found beneficial in scorbutick and wandering Pains, where the Parts are infested with temporary Obstructions or Emotions; these Pains

we merited the Name of the *Wandering* at, and are Retainers to the Scurvy; the thing is found useful in them, but yet are forc'd at the same time to administer all the warm Anti-scorbuticks, in order to attenuate the Blood, and correct those Sources of sharp Salts which tear and divide the little Fibres every where. *Hist.* relates some odd Instances of Convulsions reliev'd by the Bathing in the sulphurous Baths: If we consider how different these Diseases are produc'd, we shall then know in what particular Case the Bathing is conducive; the Nerves are often loaden with a Quantity of Humours, which are relaxing, and yet Irritating; and as the waters are exiccant and Evaporators of Humours thro' the Pores they prove of some service to these Cases: I know a Lady who could not move her Limbs at all, but at certain times they were drawn into Convulsions; she recover'd at the Bath by Bathing and Drinking. I shall not take upon me to mention all the Advantages accruing from the Bathing in warm Baths.

THE next Exercise we shall take Notice of is *Walking*, where we are to observe this Maxim, that it must always be proportion'd to the Strength of the Body: Weak People must avoid immoderate Walking, and Parts too much distorted must not be

be strain'd by walking much; for as Humours don't circulate readily thro' the injur'd Fibres, and by this Exercise a Flux of them would be invited thither, they would, every Time they walk'd, be infected with fresh Defluxions; \* wherefore Walking is notoriously known to be prejudicial to gouty Persons; if they should then walk much, and over rough Ways, what must they expect but constant Fits of the Gout? The Old and Decrepid, the Strong or People recovering from a Sickness, must not pretend to vye with the Young and Healthy; what would add Vigour to the latter, would demolish the former; neither their Spirits nor their Muscles would hold out; the first would be exhausted, and the latter would be softer'd and relax'd; whereas in healthy Persons, whose Stomachs are good, and who require a good deal of Nourishment, Exercise serves to send all our Blood and Fluids thro' the minute Vessels, that they may be divided into very minute Particles, and that the Secretions of the Humours may be duly perform'd thro' the Pores of the Kidneys; and that fresh Spirits may be generated. It has been a Question, whether by this Exercise more Spirits are not evaporated, than bred, to which it may be answer'd, that then such Exercise is justly proportion'd; there is no doubt

\* Cheyne, p. 98.

every Action of the Day requires Spirits to execute it, but so long as the Repair by Meat and Drink is greater than that Expence, they serve the Turn of Life; whereas sedentary People for want of this Benefit breed no Spirits, because their Blood grows gross for want of Motion: Nature then is no *Miser*; she hoards no more Spirits up, than what will sufficiently answer the Business of the Day, and this she supplies out of Food. The Measure of Walking, is Lassitude; so soon as they find themselves begin to grow weary, 'tis Time to leave off; because, the Design of the Exercise is to put the Fluids in Motion, and to evaporate the abounding Humidities from the Solids; when this is done, Weariness seizes them, that is, the blood-vessels begin to be over-stretch'd, and press upon the Nerves and hinder the Influx of animal Spirits: This would be against the Design of the Exercise, if it would be turning it into a Labour; a Commotion of the Fluids, an Augmentation of their Motion, and an Exhalation of Vapours do not co-incide with the Pressure of our Vessels, that is, too great rarefaction; and therefore when we perceive ourselves to grow weary, we must be contented for that Bout. It sometimes happens that a little Walking makes some

some fall a sweating excessively: This is plain Argument, that those People abound with Moisture; and that their Bodies are very impure: Sweat is by no Means the Measure of this Exercise, but this Flowing is improperly call'd Sweat; and it flows without any Lassitude, we are not to regard it, but must walk on, till we find ourselves grow, as I have observ'd weary; for however the Humours flow from a Plenitude, they are not therefore sufficiently mov'd round, which is the main End of Walking; nor are they to cease from this Exercise, till, besides the beginning Weariness, the Sweats begin to run slower, and their Colour grows less lively, because when once the Fulness is discharged, the Remainder has Room to fly off *Perspirabile*: Besides, these Sweats are only the Consequences of an Oppression of the Vessels, which load them so much to hinder, if not destroy, their contractile Power, so that they flow merely from the Protrusion of the Fluids, by the Virtue of the Exercise, that moves the lower Limbs, and all the Fluids contained therein, into the upper Parts; but as soon as the upper Vessels are a little unladen, they, and all the Fibres regain their elastick Power; and then the Blood Motion is under that Faculty, that contracts the Vessels and Fibres contract and



bile and thrust the Blood forward in a  
 regular and stated Manner; nor has the  
 serum any leisure to drop it self thro'  
 the Pores in Sweats, but only in Steams  
 and Effluvia, which is the original De-  
 sign of Nature; because, were the Pores  
 design'd for watry Liquors to pass, they  
 would be stronger fram'd, whereas under  
 the present Circumstances, they would  
 grow too flabby; Walking therefore in this  
 state of Humours shou'd reduce the Vessels  
 and Blood to their natural Condition, where-  
 as bilious Persons shou'd use this Exer-  
 cise moderately, because it evaporates the  
 watry Parts in Steams, and reduces the  
 mixture to a greater purity or simplicity  
 of Principles, so that the Fluids become  
 purely Bile, and introduce Diseases suita-  
 ble to that Humour; whereas Phlegmatick  
 Persons may use it more freely, yet mode-  
 rately, because a gentle Motion encreases  
 the Heat in the Blood, and that attenuates  
 the glary Humours, for Bath Waters will  
 with their Heat attenuate the White of  
 an Egg, as has been observ'd by the Aca-  
 demy of *Paris* on the Waters of *Balle-*  
*gny*; however a greater Heat will render  
 the Phlegm more viscid, and harden it,  
 so render it unfit for Circulation: And  
 Persons whose Blood is viscid, and Fibres  
 relax'd, and are therefore become Asthma-  
 tic, may for the Reasons already nam'd,

be advis'd to gentle Walking, because the Fibres will be strengthen'd by Evaporation of the more watry Parts that relax'd them, and the Phlegm will be thereby thinn'd and urg'd forwards in the Vessels, and the sticking in the Lungs will be shock'd off. It helps People who are troubled with Indigestions of the lower States, because it strengthens the Muscles of the lower Part, and consequently serves to brace those of the Belly, by which the Comminution of our Victuals is much assisted; it also helps the Descent of them out of the Stomach, by the gentle Shocks given the lower Parts at every Step we take, and lastly by increasing the Heat, it helps to attenuate the alimentary Tincture, and render it fit enough for entering into the Lacteals, which without this Exercise, or something analogous to it, wou'd be viscid, and wou'd stick close to the Walls of the Intestines, and introduce Colicks and Iliack Passions. *Sennertus* takes notice of one Advantage by Walking bare-footed on a cold Floor, namely, that it promotes a Stool, and therefore advises Persons very Costive to use this Exercise on the cold Ground; but is afraid more Damage wou'd accrue than good from it, because Persons subject to Defluxions, had much better be Costive than be always Coughing and Spitting, and weakning their Lungs with a L

of Humours; and besides, who but the Poor and Indigent dare venture: This however may serve as a Caution to such as are troubled with *Diarrhæa's*, for as *Dolens* says, *frigido lapidi insidentes vel pavimentum calcantes, Diarrhæâ corripiuntur.*

THIS Exercise is dangerous in the *Fluor albus* or Whites, because every Motion of the Legs shocks the *uterus*, and throws off Humours adhering to it, and moreover the same Shock invites an Influx of Humours into the Womb, which two Inconveniences concurring are too many for weak Creatures; I have observ'd some old Women, who were oblig'd to walk much up and down Stairs, strangely subject to this Disorder, and had it not been for the Indulgence, they are by Reason of their Faintness oblig'd to favour themselves with, they must have necessarily sunk into an Atrophy, which ordinarily speaking, they escape by thus comforting themselves; but then they fall into *Asthma's*, and rub on till Seventy. It prejudices Women in the nam'd Disorder, it also hurts them in Bleedings of the *uterus*, or in bloody Water from Men, for the Blood being mov'd more swiftly forward, it grows hot, and takes up a greater space, and blows up the Vessels, which being more open spill their Contents, and

is not advisable in these Cases. And as I have observ'd on Riding, so I say of Walking, that it is prejudicial for those who have Ruptures to walk much. If an erect Posture is hurtful to them, much more is Walking. Where the Bowels are toss'd at every Step from Side to Side, it forces the Intestines down thro' the Rings, and never will suffer them to recover their Tone. \* *Sanctorius* tells us in his 13th Aphorism on Exercise, that if a Person that has lain long, shou'd be troubled with Pains of their Feet, Walking is a Remedy; I must confess it is not easy to understand how Walking will have this Effect, or how Walking will relieve it; for Humours by Lying don't usually attack any of the extreame Parts; however if they do, Walking is inviting a Flux of Humours down to the Part already affected. If he means, the Gouty Persons, who by Ease and Indolence have become such, will be relieved by Walking, 'tis contrary to all Expectance.

As I observ'd that Walking was inconvenient for Bleedings of the Womb, it may be then justly inferr'd, that this Exercise

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\* Si diu jacenti dolores pedum superveniant, remedium ambulatio.

is proper in an Obstruction of the *Menses*, for it attenuates the Fluids, and shocks the *uterus*, and therefore helps them forward: It is for this Reason we advise such Women as are put into Steel Courses for the Promotion of them, to walk much afterwards; for it answers, as far as it may, the end of Attenuation, which is the Remedy. \* *Hippocrates* tells us, that Labour is good for the Joints and the Flesh; and, that Walking helps the Mind. By Labour is meant strong Exercise, or Exercise turn'd into a Business; and I have already observ'd where Parts grow strong by it, but how Walking shou'd clear the Mind, is not so easily comprehended; however, Men of clear Understandings must have Organs fitted for a free Circulation of Spirits, and must have Plenty of them, and as one Part may be much stronger than another, so it happens that ingenious Men don't often make the finest Figure; Ricketty Children, deform'd as they are, have often fine Genius, the Head is well supply'd, and the other Parts are starv'd, and as Walking evaporates the Humidities, strengthens the Fibres, and moves and attenuates the Blood, it necessarily helps to breed Spirits truly *Ætherial*, and this is all we



can say how *anima confert deambulationem* namely, Men constituted with strong Fibres and Juices, circulating with ease thro' the Vessels, and furnish'd with Blood neither viscous nor sour, nor salt, but exactly proportion'd in its Principles, perform their Functions with all the Exactness and Nicety requir'd by Nature.

PERSONS subject to *Palpitations*, should avoid much Exercise, because the Heart does not beat without a plentiful Influx of Animal Spirits, and this Influx determines the Pulsation; if therefore the Pulsation be irregular, we are well inform'd of the Nature of the Influx; and as Walking puts the Spirits into a swifter Course, so it hastens their Motion out of the Brain; but this Motion is for the most part irregular, and explosive; so that whatever urges forward that, will occasion this: This holds good in all sorts of Convulsions, and in particular manner if the Blood be too bilious, this Motion will still be more explosive.

WALKING, may all Motion and Exercise whatever is inconvenient in Madness, because such Persons should be close confin'd in dark Rooms, and kept free from anything that will put the Blood and Spirits into a Hurry; whereas Motion would attenuate the Juices, and render them very moveable.

moveable and fiery, and would surely encrease the Disorder. In this Disease every Method is us'd to keep the Blood low and poor, and to keep the Spirits in a Calm, and therefore it is we see nothing upon the Files of Physicians whole whole Practice lies this way, but Bleeding, Vomits, Purges, Blisters, &c. repeated *usque ad Nauseam*, they keep their Patients dark and feed them poorly: But as such People are in great want of Rest, Opiates must necessarily come in play; they calm the Spirits as a Charm, and proper Discharges being premis'd, nothing better contributes its share towards a Cure than *Opium*; but as it fixes the Blood and Spirits, the Plenitude must first be taken off: And what is here said of *Madness*, may also be affirm'd of *Phrenzies*, where there is yet a greater Fury than in Madness, for the time it lasts upon the Patients, which is occasion'd by the Violence of the Fever and the Inflammation; and for these Reasons it is, that the Diet must be more strictly look'd to: Opiates here also must be avoided till the Evacuations are made; so that Madness and Phrenzies are cur'd in the same manner, only they differ in the Quantities; for as in Madness the Fibres are tenser, and the Fluids drier, that is, very saline; but no where are the Humours truly fix'd, so as to stand still, and as it is an original Disease,

ease, Regard is had to the Disease without Reserve; whereas in a Phrenzy the Fever is the Original, and whatever is done to cure the Inflammation and its Consequences, must not exceed that Vigour, which will be sufficient to contrast with the Fever afterwards; for the Fever not having deposited all its morbid Matter on the Brain, that being cur'd without due Regard to the Fever, the Patient would slip through our Fingers at last; and whenever such an Inflammation is strongly fix'd, it must be a very dangerous Case, because the first and primary Indicant is the Strength of the Patient: If the Disease calls for more Discharges than these can bear, the Burden will prove too heavy for the Bearer, and Nature must of Necessity succumb. When Persons are left low, but yet free of any Disorder besides, the Kitchen alone will afford them Relief; but when they are dispirited, and moreover have a Disease to struggle with, the Repairs prove insufficient, because the Disease wastes them faster than they can fill, and we are oblig'd to load their Stomachs with Medicines proper for the eradicating of their Malady, many of which may take off the Appetite: Patients under such Circumstances are in a deplorable Case, they live miserably, and Life is hardly worth the Pains they are at for its Support: What is it they can now expect

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When they find by long Experience, that notwithstanding the Physician's Care and Nurse's Indulgence, they lose Ground.

To know whether Motion would be of use in Coughs, the Nature of them should be consider'd; supposing the Stoppage of Perpiration to be the evident Cause of all of them, yet the Blood may be differently constituted, for it may be phlegmatick in one, and hot or acrimonious in another; where the Blood then is volatile and saline, this Exercise would help to concenter it more, as to render it nearly caustick, by exhausting the watry Parts, and leaving it very thin; and by thinning it so much, that what share would run through the Glands of the Lungs into the *Trachea*, and irritate them continually, and at last exulcerate them: 'Tis not unusual to see thin and spare People, who are troubled with a Cough, grow very lean, and cough continually, while they are oblig'd to stir much about. We Experience that Walking affects the Lungs, if our Journey be ever so little on Hill; and upon swift Motion, we see the same happens; so that they who are troubled with any Distempers of the Breast, should heedfully observe how Walking affects them; and as the fuller Parts are, *ceteris paribus*, the greater will be the Secretion. Then Walking, when thin People are infested

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infested with a Cough, must throw a great many Humours of a caustick Nature into the Lungs. Where the Cough is Asthmatick and the Lungs are only stuff'd with Phlegm, Walking gently is useful, it helps Attenuation and Expectoration, and cleanses the Lungs and all its Ducts.

IN spitting of Blood Ease is commensurable, for any Exercise whatever opens a Vessel a-fresh, by attenuating the Flux upon which account they swell and stretch the Mouths of the Vessels. Nor is Exercise to be us'd where Persons are liable to Swoonings, because it weakens the Spirits, of which they have great need, and many are as subject to swoon upon Walking, as I have known others upon Riding, where they use it above their Strengths.

THIS Exercise is doubtful in Colic because if they proceed from an Obstruction of the Excrements only, Walking shakes off the Adhesion, and promotes Stool; so that the Winds pent up in the bowels of the Colon, will find a free Exit in a short time after; whereas, if the Cause of Pain be an Inflammation of the bowels, they will be more inflam'd by the gentle Exercise; for, as I have observed, that all Inflammations are encreased



Touching them, so an afflux of Humours  
to an obstructed Part, presses it, and  
gives the same Trouble as Touching does it.  
For can it be determin'd, whether a Jaun-  
ce will be prejudic'd by Motion, till  
we consider the Cause from whence it  
proceeds: That from a Viscid obstructing  
the Passage may be reliev'd by any Motion,  
particularly by Leaping, so it be gentle and  
moderate; for all Viscidity of a phlegmatick  
nature is thinn'd by Exercise; whereas, if  
a large Stone, or an Inflammation introduce  
nothing is more prejudicial; because the  
stone must not be mov'd by Force, and the  
heat is heighten'd by too copious an In-  
flux of Humours, which must necessarily  
distill and inflame the Part more. In  
this manner Dropsies may receive Damage  
Benefit by Walking; where Humours  
are found a Passage thro' a Branch of a  
lymphatick, and are spilt into the Cavity  
of the *Abdomen*, Walking only thins the  
serous *Membrana*, and prepares it to pass more tea-  
sily thro' the Breach, and does therefore  
prevent the Deaths of such Persons: And  
I think this Consideration seems to be  
neglected too much in Practice when Peo-  
ple are Tapp'd for the Dropsy: The Breach  
in the Lymphatick is sometimes the Occasion  
of the Disease, which is often introduc'd  
by a slight Cause; and what Alteratives  
may be of Advantage, if this Indication be

neglected: Surely Stypticks ought to be given after Tapping, as the only Remedy to prevent the Lymphatick to ouse. Ought not we to proceed as much against the breach of a Vessel in this Case, where Life lies at Stake, as in an *Hæmoptoe* but we find this main Indication neglected, and Courses of Bitters and Cordials insisted upon, which will rather open, than close the gaping Vessel; I am confident there would not be occasion for so repeated Tappings as we hear of, if this were a little better consider'd. However in Anasarcaous Dropsy, where the Humours are phlegmatick, gentle Walking attenuates the Humours and sets them in Motion, but it ought to be remember'd, that the Legs being a depending Part, must be kept in an horizontal Posture after it, or the Humours flow down to them, and Stagnate there.

THIS Exercise agrees with Hypochondriacks; for the Disease does so frequently attack sedentary People, that it is the Bane of Students. Thus sitting, in a forward and curv'd Posture presses the Bowels, their Stomach, Liver, and Spleen, so that the Circulation is retarded there, and as the Blood stands still or moves slowly, it thickens and grows sour, and serves for Levain to the whole Mass; where

The Disorder is thus begun, a Scene of troubles ensues, which are entail'd on them a Rentcharge, the Bitters, Chalybeates, Volatiles and Bath Waters continu'd from Month to Month, nay from Year to Year, scarce return the Blood to its pristine purity, there are still some Glands so obtrusely obstructed, if not grown together in the Posture, that no Drug yet found capable of opening them, and therefore many of them will complain for Life: Here Walking helps to attenuate, and in a particular manner, to drive the Medicines forward into the minute Fibres, and it accordingly commanded, when these Courses are entred upon. What is said of this Disease may also be affirm'd of the Nervy, and indeed I look upon the former to be generally speaking a Branch of this; but, having regard to the Disease in this Country jointly, Walking is conducive in both to attenuate the Juices.

Let us hear *Hippocrates* upon this Example: When a Person walks, the Body is warm, the Victuals grow warm, the Body therefore is plump'd, but the Belly is made thin; and for these Reasons it is dry'd, because when the Body is mov'd and grows warm, the thinnest part of our Nourishment is first consum'd by the inbred Heat, and partly thrown out by the Urine, and partly by the

the dryest part of the Victuals remains; that along with the Belly, the Flesh is dry'd. Morning Exercises extenuate but make the Head light, free, and ready and promote a Stool; they extenuate, because the Body being mov'd grows warm but Walking, after other Exercises, makes the Body clean, but thin; thus we see that Walking attenuates the Juices, thins the Bowels, distributes the Chyle, promotes Perspiration, and advances Nutrition, if proportion'd to the Strengths of the Person that uses it; but on the other Hand, if it is immoderately us'd, it heats the Blood and Juices, dries them, makes us costive, evaporates too much by the Pores, and wastes us insensibly; for it promotes Urine and Perspiration, as surely does, and if we use it so much to discharge more Humours than the Patient can supply with his Meat and Drink the Repairs will bear no Proportion to the Discharge, and we must waste.

To conclude, this Exercise has its Advantages and its Inconveniences, as all others; and to determine in short upon the *Morning Exercise* is convenient for Persons who have drank much, and have heap'd up Crudities or more Matter than they can digest, because it depletes the Vessels of the Load they can ill dispose

with; and of a Cacochymy, which must needs be introduc'd from the prevailing quality of the Liquor they have swill'd; which if Malt-Liquor, it makes generally our gross Juices, and fills our Stomachs with Wind; if *French Wine*, it makes our Blood sour and astringent, and gives Gouts, Stone, Colicks and *Diabetes*; serves to raise an Appetite, because it lessens the descent of the Contents of the Stomach, and unloads it of whatever burdens it, and as it moves the Blood forward, and consequently promotes the Secretions, must of Course help the Glands to throw out their Ferment into it; it also shakes off Heaviness and Drowsiness, which, as I have often observ'd, depends on a calm Motion of the Spirits thro' the Brain, but the Motion of the Legs sets forward the Blood's Motion every where, and rouses us from moving it. This Exercise after Meat, helps it out of the Stomach, and therefore cures Indigestions of the lower Kind, where the villi of the Stomach are not irritated enough to make it descend, this Motion sets the Muscles of the Abdomen upon their Duty of Compression, and they send downwards thereby; there is one Caution of great Service to Persons troubled with Indigestions, namely, they ought to make use of a Swathing Band ty'd round their Middle, so as to compress the Stomach



mach and Bowels; this is an artificial Supply for the Weakness of the Abdominal Muscles, which ought to squeeze the Stomach and the Viſcuals, thrown in, to the Pulp; 'twas an Observation of *Piſe's* in Hypochondriack Winds, and he observes that it help'd Concoction. This Exercise in the Evening, helps to throw down Winds from the Bowels, by helping to attenuate the Contents of the Stomach; it prepares for Sleep, because it fatigues and sends the Viſcuals into the Blood, which fill the Veſſels and load them, and therefore Sleep ensues upon full Meals. Walking up hills fatigues, by laying a Load upon the upper Parts, inasmuch, as that Motion puts the lower Muscles in Action, and thereby compress the Veſſels so much, that the Blood mostly circulates in the upper Parts, and occasions a Load in the Head, as is perceiv'd by the flashing of their Eyes, running at the Nose and Eyes, the weight of the Head, and Drowsiness; and upon the Lungs, as appears by the Breath, which shortens as the Blood abounds in the Veſſels there; and lastly upon the Skin, as appears by a Weariness, and at last by Sweating, both which plainly demonstrate a plentiful Flux of Humours that way; and this Exercise much repeated, weakens the Tendons of the Knees by overstraining them, that is, by relaxing them; for upon

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mounting, the Extensors and Flexors bear a greater share of Action than upon a Plain, and we are oblig'd to trust alternately to both; so that every Step lays the whole Stress upon one Set only; whereas in walking on a Plain, each bear their share together; or at least so soon as the Body is brought to a true Center of Gravity, which is much sooner than is done on mounting up Hill.

BEFORE I take my Leave of this Subject, I shall make bold to take Notice of some other Exercises, which, if long continu'd, hurry on Diseases of great Moment; among these is *Standing*: They who are oblig'd to Stand long, keep all their *Extensors* in a Tonick Motion; they fatigue them, and spend their Spirits in this Exercise: Nothing more debilitates than constant and immoderate Exercise; for as gentle strengthens, so immoderate weakens: The difference is, that gentle Exercise draws Spirits to the Parts, opens the Passages, and exhales Humidities; but immoderate exhausts the Spirits, makes the Fibres too rigid, dries up the Passages, and unhinges the Spring of Action. Pressure straitens all the Vessels, where the Stress of it lies; and as standing for a long Space hinders the free Passage of the Juices thro' them where the Muscles continue to press them, the Con-

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sequences

sequences of such a Pressure are *Varices* where the Veins being hinder'd to recirculate their Fluids, they must of Course swell and be distended, and often so much as to burst the inner Coat of them, and produce these Swellings, which are easily known, because, upon viewing the Legs, we perceive the Veins vastly enlarged. This Posture is inconvenient for Persons troubled with Nephritick Pains, to which I would include all Pains in the Place, where is the Region of the Kidneys, which however do widely differ in the Seat and Courses; however, as every Pain seizing upon this Region, is made worse by Standing, I venture at present, to give them this Denomination; for in a *Lumbago* or rheumatick Pain on the Muscles of the Back, where, if they bend themselves with their Heads forward, they cannot raise themselves again without vehement Pain, *Standing* keeps those Muscles where the Humours are deposited, in a Torment Motion; and as any Posture obstinately continu'd, gives Trouble, it must, that, serve as a *Stimulus*, to invite a further Flux of Humours thither, and may last introduce an Inflammation and an Abscess. It is then a dangerous Posture for inflam'd or ulcerated Kidneys, because it invites a Flux of Humours, and may endanger a Gangrene; it presses upon the Kid-

ys, and retards the Circulation there: And  
for Ulcers there, our Business is to promote  
gentle Flux of Matter, so as to cleanse  
Part of its abundant Filth, but yet  
to invite a fresh Flux of Matter every  
y, as would infallibly happen by this  
ture: We see People in the Whites, by  
standing much, become wasted with them,  
cause a perpendicular Posture is, of all  
ers, the most difficult for Circulation;  
e same Impulse that will carry the Blood  
wards to a certain Length, would carry  
our times that Length in a Vessel situa-  
and protracted, at an Angle of forty-  
Degrees from the Point of Impulse;  
which Mechanism it follows, that the  
es in the lower Parts will be retarded  
atly in their Course upwards, and the  
nsequence of this Retardation in the  
mb will be a filling the Vessels, a Dis-  
ion of them, and an opening therefore  
their Mouths; and lastly, an afflux of  
ter suitable to the Degree of Stagna-  
: So that it is plain how prejudicial  
ding must be to Women, whose Womb  
soft and membranous Organ, liable to  
d upon every small Pressure, and more  
ect to receive Influxes than any other  
Nor is this Posture convenient for  
n who are troubled with the Stone, for  
ys the whole Stress of the Burden upon  
Pelvis, and may probably inflame the

Kidneys thereby ; for if it be large, its Weight lies wholly upon the lower Part of it, which by no means favours its Exit : Since the Posture is reserv'd for the Sides, they who are troubled with such Gravel as will pass should of all other Postures, chuse to lie on their Sides ; this Situation places the Mouths of the Ureters downwards, and favours its descent out of the Kidneys, and which, Walking drives it into the Bladder. Whether a Weakness of the Back, which Women are subject to, depends upon the Muscles, that are loaden with Humours deposited upon them, or upon the Nerves that are relaxed, Standing is inconvenient for either ; for in both Cases it invites a further Influx, and quite destroys the Tone of them : No Complaint is more common than this ; I am oblig'd, say they, to stand much, and have thereby weakened my self so greatly, that I can hardly move myself. This Case seems to contradict what we have said above on Exercise, where it is made a Maxim, that Exercise strengthens the relax'd Fibres ; but they ought to be consider'd that, *ceteris paribus*, that holds true only in People subject to Defluxions upon every slight Occasion, the Cause of them then must be avoided or prevented before. Nor is this Posture proper for such as have Ulcers in their Legs, for the Reasons already mention'd, namely,



ing plac'd in an erect Position, and the  
 les resting about the Ulcer irritating the  
 bres, a Stagnation and an Influx of Hu-  
 mours must necessarily ensue, and the Ulcer  
 will thereupon be hard to cure: In Ulcers  
 the Indications are to cleanse the Sores from  
 their rotten Fibres, to make them discharge  
 their abounding Moisture, and to dry them;  
 but if the Humours take a Bent to the  
 Ulcer, and this Posture cannot fail of lea-  
 ving them there, how will it be possible  
 for to discharge those Inundations daily  
 encourag'd by the Posture, and consequent-  
 ly the last Intention can never be answer'd;  
 that is, the Ulcer will never be heal'd, till  
 the Patient is at leisure enough to place his  
 body in an horizontal Situation, which the  
 Surgeons find by daily Experience to be  
 the best. Nor is this Posture proper to weak  
 Stomachs; not only because the Stomach in  
 this Posture hangs, but is propp'd by a sitting  
 posture, as *Ramazzini* has it, but moreover,  
 because by this Posture a relax'd Stomach  
 lets go its hold of the Victuals plac'd  
 in it; it is not capable of bearing the Weight  
 of them down into it, they therefore slip out at the  
 Anus undigested; the Tincture is not  
 absorbed, nor fitted to enter the Lacteals,  
 so that it passes down in Stools, and they  
 starve for want of Nourishment: This is so  
 agreeable to Truth, that they who have any  
 Ulcers in their Stomachs which they want

to be rid of, will by Standing find the Load to vanish. Nor is it proper for such as have any Disorder in their Bladders, because the Urine is promoted by this Posture, and it certainly is, the Bladder lying with its Neck inverted will feel the Load, the Saliva by their Stimulation will continually twinge the Membranes to Excretion, and the Detrusors Force added to, or encreased by this Sting, will weaken the *Sphincter*, that the least Quantity of Water will stimulate, and it will give Persons at last an incontinency of Urine. To conclude, Standing loads the Head and Breast with Humours, and it prejudices the Legs and Bladder; because if Humours don't circulate in the lower Parts, the Legs will swell, and the Bladder will be weaken'd from the Weight that always lies upon the *Sphincter*, the Blood not circulating in the lower Part the upper will be loaden, and therefore the Head will be oppress'd, and such will be troubled with *Vertigo's*; and the Lungs will be also croud'd with Blood, and consequently *Asthma's* will ensue: In short, unequal Circulation must be avoided, which this Pressure certainly introduces,

## C H A P. IV.

*Of Sleep and Watching.*

**G**OD has fram'd us so wonderfully, that Vicissitude is useful for Mankind; we Sleep to repair the Expences of the Day, and we Watch to do the Duty of Life: To Watch always would be playing the Extravagant, and turn us into Bankrupts; and to waste our Life in Slumbers, would destroy the End for which we were made; we should observe a just *Medium* in Sleep and Watching, if we design to continue in Health: Altho' the Day was originally ordain'd for Watching, and the Night for Sleep, yet it would be wrong to indulge or labour as these approach; and to cease from Exercise as soon as Night comes, or to Labour while Day lasts; besides, if Sleep were to be regulated by the Night or Day, we should always be changing the Scene, nor should we observe any Regularity, The Business of Sleep is to refresh our wearied Limbs; to hoard up Spirits; to increase

Perspiration ; to warm our Vitals, to appease a disturb'd Mind, and to curb many Evacuations. When the Actions of the Day have overtoil'd us, and have so wasted our Spirits that they cannot suffice to animate the Muscles for Motion, an universal Languor or Inability seizes us, we affect to sit or loll, and with great unwillingness do we move, there are scarce Spirits enough left for us for Circulation, but more especially in an erect Posture ; and therefore it is we chuse that Position, where all our Limbs are born up by a soft Stay ; that is, we chuse to place our Limbs and Body in an horizontal Posture upon a Couch, in which the Blood returns with the greatest Ease, and if Nature observes her Course, in a small time a temporary Palsy and a Lethargy seize us for we lose all our Senses, our Muscles move no more ; we become insensible, because we forget our Calamities, and are so far unmanly as to have laid aside Reason. Whilst we are under this Tranquillity, the Heart, the Lungs, the Brain, the Stomach, and all the Glands do their respective Offices without the least Lett ; the Spirits suffice to continue the Contraction and Dilatation of the Heart and it thereby sends the Blood forwards to all the Arteries, even the minutest, and forces its Return equally ; Digestion goes forward as usual, and if we believe *Sanctorius* better than when awake, for to digest



well, is to have our Victuals well prepar'd, well diluted, regularly press'd by the Vessels of the Abdomen, and turn'd into Chyle; whose Principles should be duly blended; being well prepar'd, I mean well chew'd; we see our Cooks chop their Meat very small, when they design it shall be soon made into Soup; by this previous Preparation, the Water being heated, sooner extracts the Tincture from the Victuals, and the Cookery goes forward apace: So it happens with us, that without this necessary Labour, the Victuals being often very coarse and tough, are sent out of the Stomach into the Intestines without being chew'd, no Tincture is drawn out of them; either by the Assistance of the *Saliva*, the ferment of the Stomach, the Bile, the pancreatic Juice, the Pressure of the abdominal Muscles, or the Warmth; they descend thro' the *Anus*, and give no Nourishment: Now in Sleep nothing is wanting by which Digestion may be perform'd, all is the same, saving that the Heat of our Stomach is augmented, which adds Force to the digestive Power; Watching indeed better forwards the descent of our Victuals, because we generally move whilst we are awake, and Motion

Post cibum calefacientes humectant, alimentum in corroborando. Hipp. de vict. Rat. L. 2. Sect. 4.

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tion promotes a Stool, as has been observ'd above, but in Sleep the Digestion is less disturb'd: In Sleep Perspiration is observ'd to be double; but as one Evacuation increases, another diminishes; therefore the sensible Evacuations must be lessen'd in Sleep. However Perspiration is of that Moment to the Health of Mankind, that the least Diminution of it brings on very dangerous Diseases, witness such as after Exercise, with their Necks or Breasts expos'd to the Cold; and more particularly if there is a Fire in the Chamber, the Pores of the Body being open'd by the plenty of Steams flowing thro' the Skin, and the Air within the Room being rarefied, and consequently lighter than the external, that of Course rushes in with Violence, strikes the Pores, and contracts them by its swift Motion, and the Coldness; how small soever this Stoppage is, some Mens Juices are so ill habited as to fall into dangerous Coughs, ending in Consumptions, or into fatal Fevers thereby; a small Stream as enters, strikes as mortal a Wound as a Cannon Ball. I could enumerate many of my Acquaintances, seemingly of robust Constitutions, who have fallen under so trifling a Cause: If so small a Mistake proves often fatal, with how great Imprudence do such Men act, when upon Dancing or strong Exercise, who

they have greatly heated themselves, do venture immediately into a very cool Air? They run the Risque of having their whole Pores clos'd up at once, and even bid fair to have their Blood turn'd into a Jelly in a Moment, as we see some Persons who are overheated by coveting and drinking cool Liquors, fall into Inflammations of their Stomachs or low Fevers, which are both very difficult of Cure: As in the latter Case, thirst is by no means to be quench'd, so in the former the short-liv'd Pleasure of the cool Air is by no means to be indulg'd; their Stay ought to be encourag'd till their Heat is gone, and till their Pulse is return'd to its natural Order: 'Tis true, some Mens Perspiration is so vigorous, and their Pores so rigid, as not to suffer by such a Mistake; but who is he so knowing, as to be sure he is in a proper Condition to expose himself after so violent Exercise? We are not always alike dispos'd, and security, or *excessive Caution*, as the Lawyers say, *does no harm*. In the Time of Sleep the Brain does not forget to perform its Office, because the Blood arrives at it as usual; and as then there is small Expence made of the Spirits, they are heap'd up ready to be detach'd upon Waking, on their respective Errands; the *Pump is prim'd* whilst we Sleep, and is ready to be drawn to supply every occasion of the Day; Nature's

ture's Provision is very short, she lays up but for a while; and they who are lavish must be in want e'er Night, but they who are Misers and make no use of the Riches they have in Store, are like those who have good Horses and don't ride them; we must in short neither waste nor disuse them, they are of infinite Value to Mankind, because without the aid of our Spirits, we can neither move nor live: In Disease their Expence is always carefully regarded and supply'd; for whatever other Indications arise, the *Conservative* is surely one, which is the foundation for the Pearl Jewel so often prescrib'd, for Broths, Gruels, Soops and all the Tribe of Restoratives, and as Sleep is the main Study of the Physician, when Spirits are wanted, this brings Opiates so often in Play; not that Opiates help primarily to breed Spirits, but because if Sleep follows their Use, the Limbs are laid at Ease, all Action ceases, Perspiration is encourag'd, the Assistance given from the Shop or Kitchen for the Generation of them, has its full Aim, the Spirits are separated and laid up in Store in the Brain thereby, and are not spent in Tossing and Restlessness, their Motion is calm'd, and Nature goes on in a stated Road; wherefore Opiates are like a general Form, they are almost applicable to all Things and Occasions; so that the Good they do, is not

by supplying, but by hindring the expence of Spirits; the Administration of them in these Cases resembles a negative Thrift, as it hinders Patients from lavishing their small Stores to ill Purposes.

ON the other Hand *Watching* when immoderate expends our Spirits, by the constant Motion us'd whilst we Watch; it makes the Blood and Juices acrimonious, inasmuch, as it exhales the more serous and watry Particles thro' the Pores and Kidneys, and leaves the Salts in Clusters within us; it therefore inflames our Juices, because Salts will play their Part wherever they are; but Irritations are a Consequence necessarily ensuing their Existence, wherefore the Fibres will ever and anon be twitch'd and vibrated, the Juices will be hurried forward, and warm Disorders will succeed such a Condition, and at first the Blood will be left sily and inflammatory, and genuine Inflammations will be generated; but if the Watchings become obstinate, the Spirits will be so exhausted, that cold Disorders will be introduc'd: The Blood's Motion is regulated by the quantity of Spirits; if they are few, it will be sluggish, and we see it common for sickly People, who Sleep little, but are oblig'd to rise often and sit up, to have swell'd Legs; but if we observe a golden Mediocrity, the Spirits,

rits, bred whilst we Sleep, mantle and move briskly, we become chearful, the Blood is carry'd with a decent haste to all the Extremities, the Secretions are favour'd, our Nourishment is justly distributed to every Channel the narrowest that can be imagin'd, Perspiration is kept on Foot, and Stools are promoted; that the Circulation is promoted thereby, appears by the Warmth of the Extremities for Blood makes Warmth: That it helps this Motion, is affirm'd by *Sanctorius*, and his Commentator *Lifter*; and the Reason is because, whilst we watch, the Motion of the Spirits is more free, they are then dispersed thro' the Channels like open Sluices which whilst we Slept were hoarded up in the Brain; but where 'tis immoderate they are expended: And if we continue this irregular Course for some Time, we play the Spiders Game and spin out our own Ruin.

WE see then of what Consequence Sleep and Watching are to Mankind, it is of great Moment to know how to regulate them, so as to preserve Health, or to help to restore it when lost; and as Rules cannot be given concerning them, without due Regard to the Constitutions of the Parties, we shall give an Eye to them in particular.



SLEEP therefore, and Watching being  
 new'd in the Light I have hitherto plac'd  
 em, it appears that their Duration ought  
 be vary'd as the Juices differ, and conse-  
 quently it follows that the phlegmatick and  
 old People, whose Juices are gross and  
 move slowly, shou'd Sleep less than eight  
 hours, because the Progressive Motion  
 regulated by the Circulation of the Spi-  
 rit, but in Sleep that is slower; and there-  
 fore by Sleep such Persons wou'd become  
 more phlegmatick and drowzy, and be in  
 danger of dwindling into a Lethargy; but  
 the contrary, they whose Blood is very  
 active and fiery, ought to indulge more  
 Sleep, that by it the Blood's Motion being  
 retarded, they may grow cooler, for *per*  
*magnum Somnum interiora & exteriora fri-*  
*gescunt, humores impinguntur, redduntur*  
*inspirabiles, & corpora ponderosiora*  
*fiunt*, says *Sanctorius*. This methinks is  
 a safe Regulation; if we mind Concoction,  
 Sleep shou'd be indulg'd till it is finish'd;  
 in the state of Blood, Persons whose Pulses  
 are quick, whose Blood is hot, whose Wa-  
 ter is red, and whose Thirst is extraordi-  
 nary, shou'd indulge above eight Hours in  
 Sleep; but they whose Pulse is slow,  
 whose Temperament is cool, whose Water  
 is pale with a white thick Sediment, and  
 whose Thirst is little, shou'd Sleep less than  
 seven

seven Hours, and thou'd exercise stoutly to conquer this gross and sluggish State, in order to Sleep soundly, which is the Business of the Night, we must not go to Bed fasting, where there is an Appetite for this will occasion an Uneasiness, and indeed give us Pain in our Stomach, the Ferment grows sharp and twinges so sensibly, that it awakens us often: This is so evident in Persons whose Stomachs have too eager a Ferment, that nothing makes them pass their Nights more restless than going to Bed Supperless, and, in proportion to their regular Appetites, they ought to indulge in Eating and Drinking. Sleep will digest what they take, if they manage the other non-Naturals as they ought. Those Ructus, those Indigestions and other Disorders of the Stomach are banish'd by sound Sleeps, \* *Qui post die cibos eructant*, says Hippocrates, *quibus præcordia nimium cibis non coctis attolluntur, eis longior somnus convenit* and Sanctorius tells us very justly, *Cibo somnus, a somno coctio, a coctione perspiratio*. From all which it may

\* They who belch up their Victuals next day, whose Bowels, to wit, are lifted up with undigested Victuals, long Sleep is convenient for them.

† After Victuals, Sleep; after Sleep, comes Concoction and upon Concoction follows an useful Perspiration.

concluded; that Eating and Drinking  
Moderation, by appeasing an uneasy  
heaving and sensation of the Stomach, give  
that Part Relief; and as in Sleep, if regu-  
lar and undisturb'd by other Accidents, the  
Nutrients are easiest digested, want of Rest,  
those *Ructus*, that Wind, those Cruditities  
Cheyne complains of, cannot be the Re-  
sult of a moderate and wholesom Supper:  
indeed if *crazy Cartasels* will devour all  
that is set before them, if they will follow  
the Dictates of a deprav'd Appetite, and  
grow down three Meals at once, they  
suffer according to their Deserts; for whole  
Stomachs can dissolve, what a Jack-Boat  
won't hold?

— *Bucca* —  
*noscenda est mensura tua.*

It is now high Time to descend to some  
particulars where Sleep and Watching are  
concomitant. And in the first Place, nothing  
recruits the Decay of Spirits, than  
sufficient Sleep; 'tis hardly possible that  
People, how weak soever, shou'd for-  
go Action in the time of Watching; and  
therefore it is, that restless Nights con-  
sume our Strength, whereas Sleep and  
pleasur'd Slumbers refresh and give Vigour;  
whether it acts in a negative Manner only,  
sparing the few we have, and not con-

suming them, or positively by digesting the Nourishment we take, is hardly worth mentioning, because it certainly does both. The Inaction in Sleep is managing the small Stores we enjoy, and Digestion hoarding up more Treasure; wherefore Sleep in Fevers is a desirable and welcome Guest. Since the Days of *Hippocrates*, we are assur'd that nothing better promotes *Crisis* than sweet Slumbers, they both denote a calm and regular Circulation, and do hourly serve also to introduce it; nothing is more cry'd up, by the earliest Promoters of the Profession, in Fevers, than moderate Sleep; whilst the Blood and Juices are hurried and toss'd furiously about in the Vessels, and our Spirits are on Fire, as we may say, the Patients feel a thousand Pains from the Fulness of the Vessels, from the bad Qualities of the Juices, and from the deprav'd Motion of the Fluids; I have no occasion to enter into a *Detail* of the various Symptoms produc'd by these Faults of the Fluids, but as Sleep allays the Motion, if duly continu'd, the Blood will thereby be dispos'd at last to grow cool and deposite a regular and laudable Sediment, because when the Heat abates, the Sediment drops, if other Circumstances be hit; as we see, if Urine, which has deposite a Sediment, be plac'd upon the Fire, the Heat blends the Sediment with the Urine.

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and makes it disappear; so in our Blood, while the Heat continues violent, no Sediment usually appears in our Urine, but as soon as the excessive Heat abates, and the Motion of the Blood is calmer, the Water throws down a settling; now as Sleep calms the Motion and abates the Heat, if duly carried on, so it contributes to make our Water concocted, and how many *Encomium's* does *Hippocrates* give of Sleep in Fevers? \* *Upon long Watchings, a short, interrupted, comatous Sleep, encreasing the Disease, is dangerous; but if uninterrupted, continu'd and taking away Pains, &c. 'tis an excellent Sign. 'Tis the worst of Signs, if Patients neither Sleep by Day nor Night, for it denotes continual Pain, or a Sign of a Raving about to ensue. They who are likely to escape from a Disease, breathe easily, are without Pain, sleep a Nights, &c. Nothing is so terrible as constant Watching. These, with many other memorable Expressions, Hippocrates pronounces on Sleep and Watching. So*

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*A longis vigiliis somnus brevis, interruptus, comatosus, verbum exasperans, malus; at non interruptus, diu continuus, tollens dolores, &c. Optimus. Pessimum est si ne noctu neque interdiu dormiat, nam aut ob dolorem vigila adest, aut delirii affuturi hæc nota est. Qui ex morbis viri sunt, facile spirant, dolore vagant, noctu dormiunt, &c. hæc securissima Signa habent. Nil tam pestiferum, quam longa vigilia.*



that if Sleep does not come on of its own Accord, 'tis the Physician's Business to promote it at a proper Season, by Emulsion of the cold and white Poppy Seeds, or even by Draughts with *Meconium* or *Laudanum* observing such due Cautions, as I am now at leisure to take Notice of at present.

IN *Diarrhaeas*, Sleep has a great and good Effect, it curbs them; for as the Business of Perspiration is allotted for the Night, and in Sleep that work goes on twice as fast, as when we Watch, it follows, that great share of those Humours are diverted from their Bent towards the Intestines, and are then carried thro' another Floodgate: Were Perspiration as equal to the Superfluities that run off by the Glands of the Intestines, yet Sleep wou'd serve the Turn, because any Division whatever will turn the Scales, if it continues steady and firm; but more especially if we level against the inviting Cause I mean against *Irritation*; for then the Glands are at Ease from the Twinges of the acrimonious Humours lodging there and pricking their Orifices, and excessively vibrating them, so that the Juices are secreted in proportion to this uneasy Sensation; wherefore by allaying *this*, we prevent in a great measure the Efflux of *these*; whereas if we do not only focus

This Uneasiness, but also call off share of those Humours invited thither by it, we accustom Nature to divide her Spoils, she finds another Port to escape at, and the Effects in Time will cease; the lying close, and the Softness, besides the Warmth of the Bed, serve instead of an Irritation of the Pores, for it is matter of Experience, that such as spend too much Time in Bed, become thereby effeminate and enervated; the Warmth of that Place softens the Skin, and, in process of Time, the whole System of the Fibres; now the softer our Fibres become, the easier they yield to any Pressure incumbent on them; they resist the Circulation therefore less, and the Juices will run thither, where they find the least Resistance to Motion; and as this Warmth relaxes the Skin, the Pores therefore will receive a larger proportion of Juices, and by consequence will throw off a greater Quantity of *Materia perspirabilis* thereby. That other foundation of acting have these emollient *Fotus* apply'd to the Hyphochondres or Soles of phrenitick People, that they soften those Parts, make them give a freer Admission to the circulating Juices, and cause them to run with violence to the Head and upper Parts. There is no difference between the Blood-vessels, and other Syphons or Canals; as in Hydrostatical Cases, if we de-

sign to turn off a Quantity of Water, we open another Channel, or widen another already made, in order to receive a greater Proportion; so it is with our Vessels: And as it happens in filling *Thermometers*, that the Air being rarefied, makes Liquor ascend into the Tube, contrary to its natural Bent, so Warmth, by which any Part is relax'd, causes the Liquors contain'd in the Vessels to be specifically lighter than the Remainder not heated in the same manner; and the heavier, of Course, run in with Ease, and fill them. This is one of the Methods us'd in Revulsions, by which we subtract a Quantity, which wou'd have otherwise, by Reason of a Stimulation some way rais'd in the Part griev'd, run into the Brain or Lungs; and as in the Case mention'd, the Warmth of the Cover we lye under, does both relax or widen the Fibres of the Skin, and also rarefies the Fluids circulating thro' the whole Trunk of the Skin, it does of Course make way for a more plentiful Reception of Juices to them; but where there is plenty of them there will be a greater Secretion, and consequently the lower Parts will be deprived of their Supply's, and thus regular Sleep is curbs *Diarrhœa's*.

Much in the like manner Sleep conduces in Bloody Fluxes; in them the

ritation

itation is vastly greater, than in common Fluxes; because Fluxes continu'd for any time, do generally terminate in these: 'Tis a sure Sign the Vessels are grown larger, when they throw off Blood instead of Humours; and as excessive Pains in the Belly do attend these Fluxes, either the Humours must be sharper than in common Fluxes, or the Fibres must have suffer'd some Damage; and surely both these happen: For as the watry Parts are exhausted, the Salts grow more active and pointed, they pierce, cut and divide the Glands, they hurry them into Inflammations and Abscesses, and that this is the present Case, we need only view their Stools, and consider what has preceded; as to *this*, we feel their Pulse and perceive it quick and strong; we touch their Skin, and that burns; these two Signs only denote fairly that they are feverish, but moreover their Thirst, their Inappetence, and their Restlessness betray a Fever; and as the Pain precedes these Symptoms, it shews that the Fever is Symptomatical, and, by Consequence, that it is a Sign of an Inflammation of the Bowels; as to *that*, after this Farce is over, another more dismal succeeds; *Matter* variouly colour'd, and Blood, are thrown off by Stool; that is, this *Matter* is the Consequence of the Impostume broken; and the Blood, of the Breach or opening of a



Blood-Vessel, from the acrimonious, and caustick Quality of the Juices: If the Pain be excessive, and the slow Fever, succeeding the Abscess, be obstinate, the Sleep-Course will be banish'd; these two join'd together will put the Blood into a hurry, and the whole System of the Fibres into excessive Tremors and Vibrations, whereupon the Spirits cannot move with the Tranquillity requir'd for Sleep; the Motion and Quality of the Humours must be abated and corrected, before we can expect this desirable End; wherefore, if Dysenterick Persons fall naturally into Slumbers, it denotes that Nature has by some Means triumph'd over these Faults; or however, as Sleep dulls the Irritation, it will soon lessen the number of Stools, and this Advantage is no small one. All Blood lying upon the mouth of the Vessels congeals, and stops up the Orifice, from whence it flows; and if Perspiration goes forward, as has already been observ'd, it does in quiet Sleep, there will be room enough to administer proper Remedies to compleat a Cure; if any Part be indulg'd in Ease, the Spirits being diffus'd from that Course, run lazily that way; this is every Day seen in Sluggards, they lose their Limbs for want of using them; which would grow as much the stronger for rough Treatment, as the Walnut-Tree grows



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grows the better for being beaten, so that  
the main, Sleep, however it happens,  
helps to put a stop to these Fluxes of  
Blood. The large Quantities of *Opium*  
we allot for *Dysenteries*, shew the eager  
desire we have for Sleep; there is not any  
Disease requires more of it than this, nor  
are its Consequences so much dreaded  
here, as in other Cases; the Irritation  
being vastly great, demands a strong Stu-  
péfier; for the Quality of any Remedy must  
ever be proportion'd to the force of the  
Cause: This Irritation must be treated, as  
our Physicians treat their Mad Patients, it  
must be bound in Chains, it must at all  
hazards be benumb'd; for as the bloody  
tools are Drains of that Liquor, which  
is the Source of Life, we must run any  
equal, if not superior, Risque to keep it  
within the Vessels; and as in *Cholera's*  
there is a vast *Stimulus* upon the whole  
anal of the Intestines, from the very  
*Stomach* to the *Anus*, Sleep, which is not  
an effect of Weakness, but of a Conquest  
over the Disease, is a great Argument of  
recovery; and as I have chanc'd to name  
this difference of Sleep, it may not be  
amiss to give some short distinguishing Signs  
of the different Causes of Sleep: Sleep  
which attends a Victory over the Disease,  
is long and uninterrupted, the Body is  
laid in a curv'd Position, they breathe  
easily,

easily, their Pulse grows stronger, they shut their Eyes compleatly, and their Extremities keep warm; but that Sleep which is preternatural is short and uneasy, you may see the White of their Eyes, they generally lye on their Backs, they breathe short, and their Pulse is languid; in this Case as they lose their Hearing and feel nothing. The first Sleep is natural, and happens in the following Manner; Nature is pleased with Vicissitude, and therefore with Watching and Sleep; and as an elastick Body recoils and returns to the Point from whence it was let off, and continues the Motion for a considerable Time, so do we return from Sleep to Watching, and, *versâ*, during the whole Course of our Life; *this* Sleep is therefore call'd Natural and is useful, but *that* which succeeds Diseases, and is an Effect of Weakness, is preternatural, and demonstrates Danger; there is a wide difference betwixt *Fatigue* and *Decay*; *this* is a total Abolition of all our Functions, but *that* is only a Respite or a Retreat, in order to return with a greater Force; in *Languors* and *Decay's*, whatever Nourishment we take proves useless and is a Load never digested; but in *Fatigue* the Victuals turn into Chyle, Blood and Spirits, and we feel the good Effect the next Day; the Sleep accompanying *Decay* flatters the Bystanders into a belief of Safety.

while there is no Fence against the least Inconvenience; it resembles a Royalty without Guards, the first Attack from any enemy throws them down: As in a Dysentery, so here, Opiates are ventur'd on to large Dose, to sooth the *Stimulus*, and keep us easy; but if Nature plays its Part, and disposes us to Rest, 'tis the greatest Happiness can be wish'd for and enjoy'd in the present Case.

SLEEP is a great Comfort to gouty Persons much afflicted with Pain, it lays them by so fallow; the Spirits being exhausted and put into irregular Tumults by the excessive *stimulus*, have then leisure to be recruited, and perhaps to throw off by Perspiration, or otherwise, the offending Matter; for as the Humours cast off double the Quantity of Steam in Sleep as while we Watch, those Sweats, which gouty Persons have upon their Toes and Feet, while they are asleep, are an Effect of the increas'd perspiration; but nothing more conduces to relieve them, than these Sweats; while they are in extream Pain, their Feet feel parch'd and dry, the Blood is in a Fever, they are thirsty, their Water is red and without Sediment, their Pulse is high and quick, they have an Aversion for Victuals, and they are perpetually restless; but as soon as Sleep can be had, the Feet begin to

to grow moist, the Pain begins to abate the Swelling appears more outwardly, and lastly goes off; as it fares with Persons troubled with a Defluxion of Humour on the Teeth, while they are in Pain while the Humours are extravas'd on the Membranes, and twitch them inwardly they are perpetually uneasy and restless but as soon as ever they change their Bench and take their Course into the external Parts, which are much softer than the Membranous, and far less sensible also, they desert those tender Parts, are heap'd up gradually in the Cheeks, and puff them up to a considerable Size, and then the Patients begin to be at Ease, by the salutary Translation from the inward to the outward Parts.

SLEEP in *Phrenzies* and all *Deliria* is a main Intention Physicians aim at, they are even oblig'd to administer frequent Doses of *Opium* to procure it, observing the necessary Cautions in the Exhibition of it; but if by some lucky Chance, the Patients happen spontaneously to fall asleep all those Spectres and jumbled *Idea's* are lull'd, and are appeas'd in proportion to the Duration of it; so that it is very useful to part with Patients under the most amazing Distraction, and to find them next Visit, by the Assistance of a sound Sleep



perfectly restor'd to their Intellects ; Whilst the Fury of the Spirits continues, Sleep is utterly banish'd ; therefore Sleep is the first Notice we have of an Abatement of that Hurry, and however this Commotion chances to be diminish'd, Sleep finishes the Work : If we enquire into the suspension of Motion, we shall find, that if any Sluice be open'd elsewhere, the Swiftness of Humours towards the Head immediately lessens : Suppose a Person in the Small-pox under a high *Delirium* upon a suppress'd Salivation ; if the Kidneys chance to secrete a large Quantity of Urine, which is look'd upon as a great Supply for an insufficient Spitting, the Ravings will gradually vanish ; because, when by the Irritation of the Kidney-Glands, the Secretion increases, and the Humours are drain'd thro' that Passage, the Humours change their Course, the Brain settles, its Vessels being not so turgid as formerly, the Spirits move calmly, natural Slumbers engage, and the Ravings cease ; and indeed, in any Emotion whatever, in or out of Fevers, Discharges made by Nature or Art, contribute greatly to bring the Delirious to their senses, not only as they shift the Motion to another Channel, but also as they diminish the Fulness of the Vessels ; nor ought these Evacuations to be indiscriminately made : It is not a Matter of Indifference whether we Bleed or Blister ; there is this Harmony



Harmony indeed among the Gentlemen of the Faculty, that all agree Madnellses are, like blown Deer, to be run down the shorter Way; but then taking off a Quantity only will not answer the End of changing the Balance of Humours; nor will this change the Quality of the Juices; nor lastly will Alteration answer the End of Depletion: But moreover, Discharges of every kind don't tally with the Condition of the Humour to be discharged for whatever some Authors may affirm Blistering is the most improper Revulsive in high Fevers, that can be advis'd; the *Deliria* are often observ'd to be heightened thereby, the Tendons jump and start after their Application, they grow infatiably thirsty, and the first begins the Tragedy, but the fifth or sixth discovers the *Catastrophe*. It cannot be deny'd that even in the highest Fevers, one Blister may sometimes be necessary for the following Reason, namely, as in such Fevers the Vessels are excessively fill'd, it often happens, that by reason of the loss of Elasticity at the Capillaries the Blood will stand still there; so that while the Fluids run forward too briskly, here they stagnate: This *Motion* we will call, if you please, *Interpolated*; and as in this singular Circumstance the Indications run counter to each other, to wit, the accelerated Motion of the Blood requires all the diluting cooling and clogging Medicines, but the

Stagnation would thereby be encreas'd, and therefore it indicates Aperients only; so one Blister wou'd in this Case answer the Intention, by opening the Passage; but it would be unlawful to conclude that more were necessary, since one is; because it is the Business of a Physician to have a strict Eye to the Quantity of each Cause, and as that exceeds, or fails, accordingly to diminish, or add. In like manner it happens in some petechial and pestilential Fevers, where we observe their Pulses to be very obscure, and yet they are parch'd up with Heat; this is the oddest State of Fevers we meet with, the smallness and even obscurity of the Pulse denote a sparing Influx of animal Spirits into the Cardiac Nerves, and also a Compression of the Mass of Blood bordering upon a Stagnation; upon which two Accounts 'tis necessary to give the testaceous and volatile Medicines, and moreover to apply Vesicatories over different Parts of the Body by turns; but as these warm Medicines themselves, by evaporating the watry Parts from the Blood, do contribute to thicken it, unless they be administred and apply'd with utmost Caution, so we are also oblig'd, in order to allay the excessive Warmth of the Juices, to give diluting and cooling Liquors with a plentiful Hand, moderately warm: They also serve to envelope those dangerous Salts which appear

to

to be caustick, on certain Occasions, and to wash them out of the Blood; or however to bring them down to the weakness of natural Acids: On this Occasion, it is evident, how contrary are the Intentions to be pursu'd, and yet this Strait is no new Accident with Physicians, and must be managed with a steady Judgment. It cannot be expected, but that, in such distal Cases there is the utmost Danger of Life; where Causes are contrary to each other, and yet subsist together in one and the same Mass as plainly appears in the two Cases here mention'd, we are to postpone no Intention, and leave it to Chance, and a fatal or dubious Prognostick; if the Humours are duly discharg'd and alter'd, Sleep will ensue, and bring those huddled and chimerical *Ideas* to Order.

SLEEP in pleuritick Fevers and Pleurisy has a good Effect; in the former it helps to digest the Matter of the Fever, which being prior to the Pain, is mainly to be regarded and in the latter it lulls the Anguish, and thereby prevents a Hurry of the Humours as well as an Expence of Spirits we should be at, if we Watch'd; and it denotes an Abatement of Symptoms also, which, if violent would not suffer us to take Rest: Wherefore, as Sleep is of certain Advantage to abate Pain, it deserves Enquiry, whether

we might not procure *it* by Opiates, which to answer justly, we must examine the symptoms of each Disease; and therefore is the Pain of the Side in a pleuritick Fever only symptomatical, if the Fever be in danger of turning malignant, if Concoc- tion be thereby impeded (as may be di- tern'd from the inspection of the Urine) if previous Discharges have been duly made, and if the Humours are not too much im- acted, we may venture to answer the ur- gent Indication, because Pain, if excessive, will countervail the best of Symptoms; let the Patient have the most promising Signs, but yet be excessively in Pain, it will now down all our Expectations; and therefore, tho' Opiates do more inspissate the Juices, and thereby render them subject to stick in our Capillaries, and by consequence make these Fluids, already too gross, more so, and more particularly those already stick- ing in the Part; yet because they sooth and allwage the Pain and Anguish, and give us respite to recover Strength, they gain a happy Truce, till proper Appli- cations and Remedies can be sufficiently used for the removal of the other prevail- ing Symptoms, which act in Opposition: and thus we may say of Pleurifies also; Whereat they ought to be prudently manag'd:

IN Consumptions, where Coughs are troublesome, *Sleep* is wish'd for by the Patient, and endeavour'd for by his Physician; it generally happens that Sleep and the Cough keep Counterpace with each other: they who sleep well, cough little, and, *versâ*, Coughing keeps consumptive People awake, and they complain of being spent and fatigu'd, and are sore about their Chests. Coughing is a strong Action of the expiratory Muscles, and when they are frequently exercis'd no wonder they should complain of Lowness and Weakness, since the expence of Spirits bears a proportion with the Exercise; and the Soreness of the Breast depends also upon the excess of Motion, by which the Fibres of the Muscles are stretch'd and strain'd beyond their ordinary Tone; for which Reason the unctuous Medicines, which are also Aromatic or Pungent, so often made use of to anoint the Breast, are useful to allay this troublesome Soreness.

SLEEP is of use in Faintings, and if wanted, should be procur'd; not that Opium will agree with every *Syncope*, but because they who are subject to this Disorder, can bear no expence of Spirits, and therefore Watching is forbid; but Sleep helps to recruit them, or however heats them up so as to

hinder



hinder their expence, which too often hur-  
ries on Swoonings.

WHEREVER Persons are subject to De-  
fluxions of any kind, Sleep, forc'd or natu-  
ral, contributes to put a stop to them: If  
we should lay open the Nature of Deflux-  
ions, this Advantage would better appear;  
wherefore the original and first Causes of  
them arise variously, namely, from a Pleni-  
tude, a Thinness of Blood, or Pain, or too  
force a Circulation; and often from a Laxi-  
ty of the Parts: Be these how they may,  
the immediate Cause is an excessive Rush  
of Humours towards the Part affected:  
Now, altho' 'tis necessary to make use of  
Evacuations in proper Places, to discharge  
the Quantity, and to divert a Load from  
the Lungs or elsewhere, in which we must  
not be too sparing, because too gentle Dis-  
charges, by Physick especially, serve only  
to excite Commotions, but not to carry off  
the Cause, and do therefore more harm  
than if no Discharge had been made at all;  
we must then evacuate plentifully in pro-  
portion to this Cause, before we think of  
the immediate one; so that like what is  
said of Nettles, if gently touch'd, they will  
sting you, but, squeez'd can do you  
no Harm; in like manner these gentle  
Discharges do Harm in most Defluxi-  
ons, but large ones effectually change the  
motion: When these Preparations are made,

if we fall asleep by Nature or Art, the Motion to the Part will abate; since Perspiration goes more forward in Sleep, this Bent will be chang'd by that alone, if it is not too vehement; and if it is, then Opiates having a Faculty of arresting any precipitate Motion, duly administred, will abate and take off the continent Cause.

ON the other Hand Sleep is prejudicial in many Constitutions and Cases, and particularly in such *Asthma's*, as have the common Denomination of *Pthificks*; these depend on a heap of Phlegm bred in the Mass of Blood, and which by Degrees relaxes the Passages of the Lungs; but as too much indulging in Sleep brings on a Calm in the Blood's Motion, and that, a Defect of Perspiration, it follows, that by such an Indolence, the watry and phlegmatick Humour will be heap'd up in the Vessels, and will therefore add to a Disease, whose Origin is owing to Phlegm. Phlegm and watry Serum differ generally in Degrees only; for by Evaporation ever so gentle, this Serum becomes what we call Phlegm, since what was fluid becomes gross and solid, according to the Degree of Evaporation made use of.

SLEEP also in Palsies ought not to be indulg'd: I have already observ'd, that a Palsy and Apoplexy differ in Degrees, and in the Seat of the Disorder; for the latter is an Inundation on the Ventricle, on the cortical and medullar Part; but the former is less in Quantity, and seated at the Origin of the Nerves; that takes off Sense and Motion, but this leaves the Brain free, and only deprives us of Action; which by the way, shews plainly, that our Thoughts and Actions have different Seats; which is confirm'd by an encrease of the Palsy; where, as the Cause is augmented, it encroaches upon the Brain, and Paralyticks at last begin to lose the Faculty of Speech and Thought, and then they die with the oppression of Humours; for when the Phlegm abounds in all the several Passages of the Brain, and is upon Dissection found glutinous, as has been observ'd in some convulsive Cases, the Motion of the ethereal Matter is arrested, and cannot follow the Command of the Soul; therefore the Office of this Organ being destroy'd, that of the Heart must fail of course, and the Circulation can no longer subsist: These being premis'd, it must be of service to encourage Paralyticks to loiter in Bed, for Sleep would here beget Sleep, would augment the Quantity of phlegmatick Humours, these would stop in the Brain,

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Brain, and opprefs it daily more, and that Oppreffion would terminate in an Apoplexy;

NOR should Hydropicks indulge in Ease and Sleep; the Effence of a Dropfy is Water and Phlegm, which grow by Indolence: first the Perspiration is curb'd, and that adds a great deal of Water; then they grow thirsty, from a Change made in this Secretion, and heap up a great deal more Liquor than they can digest, and do therefore make less Water, because the Quantity undigested is gross and thick, and not well fitted for passing thro' the Kidneys. Thus do they insensibly wander from a Fault to Faults, and mount up to the last Round of the Ladder, from whence they must tumble. Now Sleep, when too much indulg'd, encreases the Effence of the Disease, and therefore is to be abated,

WHEN it is too much indulg'd, it brings on various other Disorders, namely *Lassitudes* because it inviscates the Mass of Blood, and obstructs or compresses thereby the Muscles, and so brings them on, a *Heaviness* of the Head; because by arresting a load of Blood and Juices deprav'd by Rest, it all relaxes the whole Passages of the Brain and material Diseases are known by a Gravity, a Weight, a Load, or Oppression

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A *Coldness*, because Cold is a Rest or Cessation from Motion, and the Juices by too much Sleep, are stopp'd in their Career; the Spirits resting in the Brain, and not being so plentifully detach'd from thence as whilst we watch, at last a Coldness will ensue, more or less, according to the Degree of Sleep we have indulg'd in; and as *Sanctorius* observes, that Lassitudes after Sleep are taken off by such things as create Perspiration, namely, by Fasting, Exercise, Watching, and Anger: \* So it appears, that want of Motion in our Fluids is the Cause of all Disorders that arise from excessive Sleep; and that some of our Non-naturals having a different Effect upon the Blood, must supply its Excess, as we have already observ'd on this Affair above. Having mention'd many of the Advantages and Inconveniencies of Sleep, I shall proceed to its Opposite.

WATCHING is generally attended with Exercise; and as Motion throws several Remora's in the way, to the flowing off of the Humours, so Perspiration does not succeed so well whilst we Watch, as when

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\* Lassitudo post somnum tollitur iis quæ facilem perspirationem reddunt; hæc sunt, jejunium, exercitium, vigilia & ira. *Aph. 67. De somno & vigil.*



we Sleep, where the quiet Posture suffers Nature to play her own Game; for the Particles of the Blood are comminuted by Motion and Watching, the Spirits are detach'd plentifully every where, they run into the Muscles and Nerves of all the Body, they run also more equally into every Part, and therefore do encrease every Secretion in porportion to the Orifices of the Ducts, so that the sensible Evacuations are also promoted whilst we Watch more than in Sleep, and therefore Perspiration must lessen of Course; it moves the Blood from the Center to the Circumference, and thus also prepares a way for Humours thro' the Pores, which cou'd not find a passage whilst we Sleep, because it attenuates grosser Humours, and then they more readily steam off in *Effluvia*; so that it becomes as necessary for Nature as Sleep; the animal Functions are invigorated by it, because the detaching of Spirits into the Muscles is the Business of the Day, and Parts moderately exercised grow stronger; but in a particular manner the Brain being the scene of Action whilst we Watch, it grows stronger by Exercise also, which, if it were not made use of, wou'd forget its Function. If it be immoderate, it weakens and makes the Body feel heavy, as *Sanctorius* observes it weakens, because where the Spirits are

spent

spent, the Persons must feel weaker; and where a heap of indigested Chyle loads the Vessels, they must feel heavy: And moreover, be it there shou'd not a Quantity of indigested Victuals load our Vessels, yet to Persons dispirited, any Quantity which their Spirits can't manage is a Load. So that Watching immoderately is a sure Method of draining the Spirits, and making the Fibres of the Brain dry and rigid; it exasperates and acuates our Humours also, by evaporating the Serum thro' all Parts whatever, and leaving them more concentrated.

FROM all which 'tis easy to see, where Watchings conduce or do harm in Diseases; for as Sleep too much indulg'd, renders People dull and stupid, so Watching immoderately us'd, makes us delirious; and therefore in Diseases where Phlegm abounds, Watching is of good Service, because it moves and exagitates, and by Consequence attenuates the Juices; wherefore in a *Diabetes* from a Tenuity of the Juices, it rarefies the Blood yet more, and increases the Disease; Watching in old Men is hard to be remedied; old Age is a Disease itself, where the Humidities are drain'd, and the Solids are too rigid; nothing can relieve either, without the hazard of drowning the Spirits; for Relaxers

and

and aqueous Medicines shou'd be made use of for these Ends; but they can't digest either; and therefore such Watchings are dangerous. In Hiccups, Watchings augment the Disorder; it is a Convulsion, and depends upon a tumultuous Motion of the Spirits, which they raise and keep on foot. 'Tis upon this Head, that *Tea* and *Coffee* prolong our Watchings, exhaust our Spirits, and are improper in Convulsive Cases; because they have a Bitterness in them, and also some Astringency, which shews they contain a good deal of Salt in them of the alcalifate kind, and as these Salts do greatly attenuate the Fluids, and make them occupy a greater Space, so the gentle Stypticity contributes to straiten the Vessels, by which Mechanism, it will happen that the Fluid will run faster forward in the progressive Motion; wherefore as Watching depends on a quick passage of the Fluids thro' the Brain, and all its Syphons, these Liquors are us'd to keep us awake; but the immoderate use of them is highly Prejudicial to all, and some Constitutions already too volatile, can hardly bear a very moderate Quantity; no wonder then Lady's are so often thrown into Vapours by the use of these Liquors; they debauch in them, they devour large Doses of them, and sip at every Tea-Table; by which they evaporate their Spirits, instead of recruiting them; where

as, if a peculiar Constitution is not in Fault, a small and settled Quantity wou'd not fail of being as good as the best and wholesomest Bitter from the Shops: The best of Things may be abus'd, one Dish may do us good, but ten may destroy us; which is like what Mr. *Dryden* calls the old Law of Duelling, if one can't beat you, ten shall. Where Indigestions are frequent, and Winds blow us up, where our Stomachs are sour, and Phlegm sticks to the Walls of it, these Bitters taken soon upon our Victuals, serve to ferment them, and to wash off part of that gross Stuff sticking there; but if the Stomach is already too bitter, and its Contents too pungent, a Draught of cold Water serves the Turn much better, and helps the Digestion readily. So that they who use those Liquors shou'd seriously consider their Circumstances,

SUCH as are naturally Watchful, shou'd avoid Study at Night; Study puts the Brain and Spirits into a constant Agitation; it raises an impetuous Motion in them, and attracts, as we may say, the Bent of the Blood thither; and as Persons who have been toss'd at Sea, do feel a Rotation for some days after, so in Study, the Spirits being put into a hurry, do not readily forget their Course, but will make the Nerves vibrate for a whole Night together.

together; 'tis usual upon this occasion to be troubled with Headach's, from the same Reason; because that Fury is exercis'd on the Membranes, which in Watching is spent in the Brain.

LONG Watchings in acute Cases, seldom fail of introducing Ravings; they are indeed but Branches of the same Cause; the same Impulse, which holds the Tubes of the Brain open and keeps us awake, being a little increas'd, causes us to think and speak inconnectedly; how nicely therefore is the Balance to be weigh'd between Sleep and Watching? Either of them are as unnatural as continual Day or Night wou'd be; it is impossible to avoid Sickness, if we don't observe an exact Measure squar'd to our peculiar Natures: This Proportion we are as much Masters of, if we will observe our selves, as we are Judges when we have eat enough; or as we are capable of knowing whether the Air is too sharp or too hot for us: They who fatigue much, require much Sleep to recruit their Losses; but on the contrary, lazy, indolent People, who hoard up too many Spirits, may afford to sit later up: Hard Study makes the Fibres of the Brain too dry and tense, therefore hard Students shou'd indulge in Sleep longer, the Places they are



are educated in, commonly are careful of Surfeits, and the young Gentlemen, of taking too much Pains, so that their early Hours do them very little harm; they need not much Sleep either to digest their Meals or relax their Heads: They generally go to Bed by nine or ten a Clock, and Sleep till five or six, that is, eight Hours; and the old Proverb

*Septem horas dormisse,  
Sat est juvenique senique.*

*Seven Hours Sleep are enough for the  
Young and the Aged.*



## C H A P. V.

*Of Evacuations and Suppression*

**T**HERE are many Discharges intended by Nature, and which when they are *well perform'd*, keep the Balance level between Sickness and Health; but whenever they are *check'd*, Diseases are usher'd in apace; if ever they *exceed* their natural Measure, then immaterial Diseases immediately succeed. The principal of these are Perspiration, Urine, Stools, the *Menses*, the *Menstrua*, the *Seed*, the *Lochia*, the Milk, Sweat, and the Piles, the Bile, and the *creatick Juice*.

If Perspiration be duly perform'd, the Blood parts with a Quantity of Steam that are excrementitious; the Parts exhaled are partly Saline, partly Sulphureous, and partly Watry; and these, if the Blood be well constituted, wou'd add to the Quantity of it; but if the Blood be *corrupted*, they wou'd add Parts disagreeable

to the Juices, and make a Bastard Plenitude :  
 We are so fram'd, that every secretory  
 Duct must perform its Office to make room  
 for daily Supplies ; and if they act accor-  
 ding to Nature, the specifick Qualities,  
 quantity, and Motion of our Fluids, are pre-  
 serv'd, and our Solids are firm ; but if  
 exceeds in Quantity, then Diseases  
 follow. Nothing is more common than  
 to ascribe all Illnesses to this Head ; if our  
 heads ach, if we have the Colick, if we  
 cough, 'tis from *Cold* ; and indeed so many  
 Diseases take their Rise from it, that it  
 would take up a Volume to enumerate  
 them, and the *Modus* of their being in-  
 produc'd ; some few of which I shall de-  
 pend to : Fevers are immediately produc'd  
 from a stoppage of Perspiration, inas-  
 much as the Blood being Cachectical, an  
 addition of a large Quantity makes it fer-  
 vent, and this Struggle is a Fever ; the  
 morbid Particles being retain'd, encrease  
 the Heat, and make the Urine high-co-  
 lor'd, and the Pulse quick : Such a Strug-  
 gle began, requires a longer or shorter  
 time for the Matter retain'd to ripen  
 digest ; which when done, the Urine  
 drops a Sediment, and the Quickness of  
 Pulse abates, and these succeed a  
 Abatement of the Heat. *Coughs*  
 occasion'd in the following man-  
 ner, the Matter retain'd fills the Vessels,  
 and

and they, being incapable to circulate the Quantity, drop some thinner Parts into such Glands as are most susceptible of them, the Glands of the Lungs being most tender in some People, receive them; so soon as they enter, they stimulate and twitch the membranous Part of the *Trachea* to Coughing; and this is a sort of milking those Glands by which they spew out large Quantities of Serum, and the Motion, if not timely diverted, is determin'd thither; so that at last an Inflammation and an Abscess are hurried on; that is, a Consumption is introduced, where they cough and spit; when the Lungs are stuff'd, Tubercles are bred inflam'd, and ulcerated: From such slender and slighted Beginnings, this grievous Disorder carries off Thousands: The Air of this Island is moist and cold for the Generality, and our Pores are always in danger of being obstructed, if not guarded against, with warm Cloaths or cold Bathing; so that Coughs are plentifully introduc'd, more especially in Winter, and our Churches can sufficiently vouch for it, and out of Numbers thus seiz'd, few of them take Care enough of them, till they are almost dead of their Colds, they call them, that is, till their Lungs are truly inflam'd, and till the next Stage is an Ulcer of the Lungs; which two last Scenes of Consumptions are not well understood

understood by the common Practitioners, and consequently not well prescrib'd to: In these Degrees so many Intentions concur, not known to them, that many must Drop, who might have a good Chance for a better Fate. Nothing is more common, than for the cold Air to bring on Pleuritis and pleuritick Fevers, they are often epidemical in Winter; the Coldness of the Air has an Effect upon the Solids, and contracts them, so that they can't throw off a determin'd Quantity of the *materia respirabilis*; but also it has a severe Effect upon our Fluids, and particularly in the Lungs and adjacent Parts; no Pleuritis or Peripneumonies are more dangerous than those introduced from the severity of the Weather, because the Air entering the Lungs, coagulates the circulating Blood in that Part immediately, so that it stops there or thereabouts, and brings on these Diseases. Ambago's or rheumatick Pains on the Back, are commonly introduc'd by Colds; the Part being expos'd for some time to the Air blowing cold upon it, is seiz'd with a Stiffness and Pain, the Blood is congeal'd there, and is distended by the Blood pushing itself forward, which Distension gives a troublesome Sensation or Pain. The commonest Symptoms from Cold, are Weight on the Forehead, a Running at Nose, and a Drowsiness, occasion'd by the



Retention of Matter, and its Stoppage some where about the Head, or at least a less free Circulation that way, by which it is thrown upon the Membranes, and upon the Glands of the Nostils; where, if it finds a Passage free enough, it runs off the Cold, and the Pores again open'd, the Form is subtracted. Swellings are often produc'd by this Stoppage, inasmuch as the Parts are loaden with a Quantity of Humours they cannot circulate on a sudden, and therefore they must inflate the Parts where they are deposited. Cold also has a bad Effect upon the *Lochia*; nothing is more prejudicial to Women lying-in than Cold, it constricts the Vessels and hardens them so that the Blood which should run free off, is retain'd; hence succeeds an Inflammation, and a symptomatical Fever ensues which proves fatal to most Women: We reflect on the Nature of this Fever, as many treat it as an Original one; where a great Enquiry ought to be made about its Origin; if Cold has suppress'd these *Lochia* if upon their Suppression, Pains seize upon the Uterus, and if a Fever ensues, this is evidently a Symptomatical Fever; but if the *Lochia* flow freely, if no Pains inflame the Uterus, and if the Suppression of them follow'd the Fever, then is it an Original Fever. But as the Causes of these Fevers differ widely, so ought their Cures, which is not

Part to enquire into at present. Asthmatic Fits are often produc'd by Cold, and as soon as cold Weather comes in, they generally are stuff'd up, and breathe short; Frost particularly locks up the Phlegm within their Breasts; it congeals the *Serum*, and makes it stick close to the Glands of the Lungs, and the closer it is united to them, the greater Force they are oblig'd to make use of to expectorate it, which repeated Endeavours do often hurry on Inflammations, so common to Asthmatics, and so fatal also to them; because they are partly to be treated with Medicines proper for the Inflammation, and partly with Anti-Asthmatics, which run Counter to each other in their Intentions. It were easy to reap up more Diseases arising from catching Cold, but in general it may be observ'd, that when we receive no Damage from the Cold Air, it is, because our Solids are equivo- lent to the Pressure and Coldness of it; but when its Qualities preponderate, so that our Fibres cannot resist, by their elastick Force, but are too flexile and yield to it, then it must follow, that our Fluids, and indeed our Solids, every where are mov'd by any manner: What can follow this Cessation, but a Suppression of the greatest natural Evacuation, and all its Consequences?

HOWEVER, Perspiration may also be increas'd above what Nature can bear, and then we must expect Weaknesses to ensue. This is the Case of woollen Shirts, which heat and dry our Bodies, and are by means to be us'd in weak People; and Exercise whatever, which promotes the Evacuation too much, renders us weak. I know a Gentleman who upon hard Riding, us'd to fall into *Syncope's*; the excess of Motion threw off his *Perspirabile* and Spirits together. What Changes are not our Travellers subject to, who sail from *England* under the Line. They are seiz'd with Fevers, because a large part of the *Serum* is exhal'd, that the Salts or Globules approach to each other; the Fevers they have generally Ardent, and if the expence of Perspiration is so great, as to exhale a good share of the Spirits, then it will be a dangerous Sort, where Dilution becomes necessary, as well as Evacuation suitable to the Case. This excess of Perspiration, often introduces *Hypochondria* and *Hysterick* Cases, where they perpetually complain of Faintness, and a Want of Vacuity within them; 'tis possible Persons have indulg'd themselves, or kept themselves too warm, by drinking warm Liquors, or by heaping warm Clo-

upon them, and the least Excess overwhelms weakly People; their Fibres are either too elastick or too much relax'd, so that any exterior Cause puts them into convulsions or Weaknesses. Moreover excessive Perspiration leaves the Blood viscid and Rheumatick, an easy Experiment proves this, since *Serum* plac'd in a Spoon over a gentle Heat turns presently into Jelly, and we are in the next Disposition to rheumatisms; and Rheumatick arises from this Incrassation; but more especially, if upon such Heat, we immediately expose our selves to the Cold, for this is a double Cause; too much Sleep by encreasing Perspiration has this Effect, in the same manner, too much Exercise will have the same Consequence; Excesses in those un-naturals, which hasten this Evacuation forward, must be forborn: Hard Drinking does in a particular manner excite a Fever in the Blood, and the Humours fly off thro' the Pores, in proportion to the Motion thus accelerated; that Drunkards seldom want Rheumatism and Sisy Blood; and moreover I have observ'd that such of them, as are always drinking and guzzling, have their *Serum* thin; the Reason of which seems to be, they never give Time enough for the Chyle to be converted into *Serum*; for this End it is necessary it shou'd cir-

culate frequently, and throw off by various Glands such Particles (as are too gross and viscid to remain within the Blood-Vessels, so that such a *Serum* denotes an Indigestion, changeable into true *Serum* by Chalybeates, Bitters, Pungent volatile and fixt Salts, and a decent Forbearance from Supplies of more, till the former is digested: To feed so unmerciful as they do, is living as if they were to die to morrow; if they eat out of Wantonness they shou'd govern their Appetites by Reason; but if by the force of a Disease let them apply for Help from an experienced Physician.

If *Stools* go forward as they ought, Health is preserv'd, that is, by them the fibrous Parts of our Victuals are carried down, as well as the grosser which are not fit to pass thro' the Lacteals; and according to our Meals, ought they to be regulated: 'Tis not enough for healthy People to have one every third or fourth Day, tho' there are some Constitutions that never have above one in a Week; but such can never preserve themselves without being found for any considerable Time; it is therefore Nature's Business to give a due account of her Burden. Every Constitution is specifick in this Case, and it may be in a Physician a tolerable handle of guess sent



at the Strength of each Person's Fibres, by the Quantity, and the Stay of the Excrements: The Conditions of a natural Stool, are, that they shou'd be of a good Colour; the Stools denote the Condition of the Bile, unless they are colour'd with Claret, Steel, Saffron, Cassia, Rhubarb, Cochineel, or some other colouring Ingredients; which, when Natural, is Yellowish; whatever other Colour they have, they denote some fault in the Blood, which must be carefully regarded and remedied; their Consistence must be such, as neither to be too moist nor too gross; if they are too thin, the Chyle and Fluids run down, and then they are robb'd of their Aliments; if too gross, they stick by the way, and endanger Colicks, and even Inflammations; they shou'd be proportion'd to what is taken. We will now descend to some particulars on their Excesses and Deficiency's.

If Stools are too numerous, the Body necessarily depriv'd of Nourishment, and the Strength decays; those therefore must of Course be wasted, and it is well if the Intestines themselves escape being rodded: If the whole of what we take, distributed between the *Lacteals* and *Arteries*, 'twere too much for this whole to sent downwards; all Supplies being cut

off from the Blood, the Spirits must soon decay: I have often been amaz'd to see what number of Stools, and what large Quantities of Excrements Children will have, when their Lacteals are obstructed, and be wasted to Skeletons, and yet live on; 'tis amazing from what Source they derive these Spirits, when upon Dissection it has been found, that caseous Concretions have been bred in every Branch of the Lacteals, intirely stopping the Course of the Chyle, unless we grant what Dr. Boerhaave affirms, namely, that part of the Nourishment is lick'd up into the Liver by some Branches of the *Porta*: \* Where-  
 " ther, says he, any thing of these Liquors  
 " enters the meseraic Veins, their Number  
 " their Largeness, the diversity of the Liquors  
 " and their Flux into the *Porta*, as into  
 " an Artery, inform us. Besides their  
 " notable Quantity, which perpetually re-  
 " ters the Intestines, which is observ'd  
 " neither to be receiv'd by the Lacteals  
 " nor thrown down by Stool; moreover

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\* An aliquod horum venas meseraicas ingreditur, doc-  
 harum numerus, amplitudo, liquoris diversitas, fluor in  
 nam portarum, ut in arteriam. Tum notata copia li-  
 rum, quæ intestina perpetuò intrat, quæ neque lacteis re-  
 pi, neque alvo expelli observatur. Tum anatome compa-  
 siva, pennatis lactea negans, & aditum ex cavo intesti-  
 in meseraicas demonstrans. H. Boerhaave. p. 29. Institut.

“Comparative Anatomy shewing there  
“are no Lacteals in Birds, and demon-  
“strating that there is a Passage from the  
“Hollow of the Intestines into the mela-  
“raic Veins.” This is a Resumption of  
the antient Opinion indeed; but as it seems  
reasonable, there is room to give it Credit.  
We don’t scruple in Cases of Extra-  
vasation, to allow that the gaping Mouths  
of the Vessels, I mean the Veins, resorb  
this into the Blood: What other Method  
have we of explaining how Matter in Con-  
sumptive Cases is taken up into the Veins  
again, and how it introduces those Fits  
of intermitting Fevers, we so regularly and  
constantly observe in the last Stages of a  
Consumption? They grow chill and shiver,  
they presently after grow hot and dry,  
and lastly they sweat profusely; their Wa-  
ter also betrays a Fever by its various Co-  
lours and Conditions, it is at first Red,  
and then at last throws down a brick-colour’d  
Sediment. Wherefore I readily believe that  
this Passage is the supply for Spirits in so uni-  
versal an obstruction of the Lacteals, as is  
observ’d in Children.

IF on the other Hand, the Excrements  
are hinder’d in their descent, many severe  
Disorders attend Patients: Colicks are an im-  
mediate consequence of this Suppression; the  
faces being retain’d, ferment and huff up  
the

the Bowels, and these Winds, which are  
 Steams from them, finding no passage  
 downwards, distend, till the Excrements are  
 duly provok'd with proper Evacuants,  
 namely Catharticks or Glisters: 'Tis here  
 as in other Retentions; if Persons suffer  
 no Inconvenience by their being check'd,  
 so long that Suppression is not unnatural,  
 but if Winds, and Pain ensue, they ought  
 to be promoted: It is hardly possible but  
 upon such a Suppression, the Stomach will  
 fail of doing its Duty; for the Bile, which  
 ought to mingle with our Victuals and  
 help forward their Journey, will regurgi-  
 tate into the Stomach, and cause Vomiti-  
 ings, and moreover, will destroy that Fer-  
 ment residing there, and consequently will  
 prejudice the Appetite; so that they will  
 neither be very desirous to feed, nor ca-  
 pable to digest what they do force down  
 and as in Crudities a freedom of Stool  
 is the main Remedy, so their Retention  
 must breed them; and therefore its Cause  
 ought seriously to be consider'd: If it de-  
 pend upon an Acidity in the Juices, we  
 are to consider that this betrays it self by  
 Belchings of sour Humours into the Mouth  
 of such Patients; if upon a *Fever*, the  
 Heat, Pulse and Thirst discover it; if upon  
 Diet, they ought to know that all sour  
 astringent, or viscid Meats or Drink, are  
 apt to arrest them; nay, it sometimes  
 happens



## *Sickness and Health, &c.* 411

happens from a voluntary Retention for want of Conveniency; in this Case the Excrements dry apace, and stick close to the Gutts, and hinder their own Descent; from what Cause soever it proceeds, it disturbs the Head, for they lye in the Road of the descending Vessels, and whenever the *Rectum* is so enlarg'd as to press the Iliac Branches, it necessarily follows, that the Circulation will be confin'd to the upper Parts, and will thereby fill them with Blood, and as the Head is membranous and bony, there will be difficulty for it to pass thro' those small and sensible Fibres, and Headachs will often ensue, which indeed are generally Attendants on Costiveness; and moreover, since some of those Particles which make up Stools, are suck'd up by the Veins, and are blended with the Blood, they are an additional Cause of those Headachs, which Hypochondriac's so often complain of. Costive People do frequently complain of Heartburnings, but either sour or bitter will occasion them; for to this Disorder, it is but necessary there shou'd be a troublesome Irritation of the Fibres of the Stomach, either of which, Humours, if concentred, will effectually do; None are more subject to them then Brandy-Drinkers, and nothing is more usual, than sour Vomitings in such as are very liable to them; and how Bile regurgitates, or

2 Sours



Sours are generated within us, has been shewn above: Costiveness is a baneful Disorder in warmer Climates, where they use *Limes*, their Liquors are dash'd with them, and they are often seiz'd with Colicks ending in Palsies; however, wary People travelling into those Parts, as I am well inform'd, will be seiz'd with these Colicks and Palsies, tho' they have never touch'd them: The Heat is sufficient to dry up the *Mucus* of the Intestines and Nerves also, from whence Costiveness ensues in the Bowels and Obstructions in the Nerves; and nothing can prevent these Effects, unless Oils are seasonably interlarded with their Diet, and unless they dilute frequently with smooth Drinks.

THE Account Dr. *Cheyne* gives of Costiveness, is too short and imperfect; for besides the Paucity of Victuals, the Heat of our Liquors, the slow Digestion, and the weakness of the peristaltick Motion, others may concur not relating to these Heads; for moreover if they drink too sparingly, 'tis hard to avoid being Costive; there is a certain degree of Dilution necessary to keep the *faces* from being too dry, and sticking to the Sides of the Intestines; and the nature of the Victuals are also to be consider'd, which may consist of Parts too stringy and juiceless,

less, and as such seldom change their Figure, they roll down too lazily, and rub against the Sides of the Gutts, and are long detain'd; besides, if the Intestines want their natural *Mucus*, which happens from numerous Causes, the Gutts become very dry and unfit for the descent of Excrements; and sometimes the Choler is wanting, as in Jaundices, which is one of the main promoters of Stools; nor are purging Stools always a Sign of an intemperate Meal, the Quality of the Victuals has a great share in producing those stercoraceous Fluxes, and they who are of tender Stomachs, tho' they eat little, but such Victuals as are, as we call it, too stirring for them, will have such Stools; and where the Quantity offends once, the Quality is ten times in Fault. Those tender People really have not so large Stomachs, as the Doctor gives them; they don't stand to all sorts of Meats and Drinks, nor do they eat plentifully, but if we consider how much they farce their Victuals with Spices, or Pickles not agreeable to their Constitutions, we may easily guess what a *Stimulus* these prove to the whole Canal, and how readily the Fibres feel their Irritation; so that it is well judg'd to affirm such a Meal occasion'd such Stools, but whereas they eat very sparingly, it cannot be properly call'd

call'd a *full Meal*. We do not doubt, but there are some Hysterical Persons who have devouring Stomachs; we meet with some who have even canine Appetites, who will devour what they can by no means digest. But on the other hand, very few of such Persons are ravenous; for the Sour that lodges in their Stomachs is generally too corroding to create an Appetite, it rather makes them vomit green Stuff, that corrodes Iron, and then they have an utter Aversion for Victuals, so that we are often oblig'd to prescribe them Bitters and Spa-Waters, in order to abate this Sharpness at Stomach, and to bring down its Edge; from all which, it must be granted, that the Quality of the Victuals is the most likely occasion of Purging Stools, most People having a better Measure of their Stomachs, than to cram down Victuals against their Inclinations, whereas few can than to piddle upon a Morfel deliciously dress'd, even tho' they are almost sure to suffer for it.

So long as the *Urine* answers in Quantity to what we drink, and so long as it is well tinctur'd, it contributes to the preservation of Health; the Proportion of Principles in it shou'd be exact, and it generally betokens the nature of the Blood because if it is pale, it shews that either

the

the Blood or Urine, abounds with too many watry Particles; if it is too red, it shews that the Blood abounds in Salts and Sulphurs; if it be Citrin, it generally betokens a Blood justly constituted; so that the Salts and Water do not exceed more, than is fit to keep the Juices of a moderate Consistence; for if it be too thick, it wou'd stop in small Canals, and produce Obstructions; if too thin, it wou'd boil and distend them, and endanger Breaches of the Vessels, or however Fluxes of various Sorts, by which the Patients wou'd be pin'd away; whereas, when it is of an Amber or Citrine Colour, attended with a chylous Sediment, it denotes a just Proportion of Principles in our Blood, fit for that *Intestine Motion*, which is specifick to our Nature; none can deny such a Motion within us, as we call Effervescence, but the *Modus* of that is not easy to explain; if we view Bodies, that being blended effervesce or ferment, in a Microscope, all we can see, is that Bubbles arise from certain Points, and take different Rounds, which break, and then disappear; whether this arises from *Friction*, as Sand in a Bag, or from *Attraction* and *Repulsion*, or whether from an innate contrariety of those Bodies, is not worth while to dispute it; it is sufficient there are Bodies found within us, which are of

con-



contrary Natures, as Experience informs us, which being blended do raise Heat, and which being strictly united by Fire, and expos'd, rise into a Flame. I observ'd above that the pale Water denoted either the Blood or the Urine to be watry; if both, there is no Heat almost in the Patient; but if the latter only, then it shews Spasms on the urinary Ducts, which straiten and suffer no grosser Particles to pass thro' them; they feel great Impediments within; their Heads feel heavy and mazy, their Breast is contracted, they complain of Choakings, and if they feel no hardness at Navel, at least their Bellies are inflated; their Pulse is often low, and very frequently quick, as daily Experience has inform'd us.

If the Water exceeds in Quantity, as it does in hysteric and hypochondriack Patients, or as it does in a *Diabetes*, and, as I have seen it do in a Catarrh, where it is Pale; as it is void of Contents, it must be specifically lighter than if it were colour'd; those exceeding Quantities of Salt and Sulphurs, which at other times tinge it, must be wanting; and if the Blood be void of them, it is impossible for such Persons to avoid Cachexies or Dropsies, because, where there is little or no Effluvia in the Blood, the Particles not moving among themselves, the Circulation



last will be affected, and their Fluxes will then stand still, and congeal into a Jelly in the Capillary Vessels; but if the Blood is fraught with them, and the thin Particles only are drain'd thro' the Kidneys, then the Retention of these superfluous Salts twitches all the Membranes into Contractions, as we experience in Hysterick Fits, which are known to be about to cease, when the Water begins to be higher colour'd, and to lessen in Quantity: The Water of Hysterick Women, and of Drunkards is easily distinguish'd, because the latter plac'd upon a Fire, or try'd with Alkalines, will not be precipitated, but the former will: From which Instance it appears, that altho' there is not Matter enough to send down a Sediment, yet there are some heterogeneous Particles contain'd in the Water of Hystericks; and, as Physicians are call'd to all sorts of People, this may serve them as a Directory to distinguish between a Fit of Hystericks, or Drunkenness and Dissimulation. Having tasted the Water in a *Diabetes*, I did not find it sweet, as Authors have affirm'd; it was rather tasteless, or however smooth, and void of Saltiness. The Catarrh I speak of, where a *Diabetes* seiz'd a Gentleman, was the most surprizing I did ever see; he was seiz'd with a violent Defluxion of Rheum upon the Lungs from catching Cold, which was

diverted by Bleeding and Catharticks; the Humours left the Lungs, and took a Rout to the salival Glands, which spu'd out above two Quarts in a Day, distinguishable from a mercurial Salivation no otherwise, than by the want of Smell: By a continuance of Evacuations the Humours left these Glands, and turn'd downwards upon the Kidneys, and then the Patient was in danger of perishing with a *Diabetes*, which for that time was taken off after the ordinary manner; of which however he dy'd the Winter following, being, as I was inform'd, seiz'd, upon a Cold, after the same manner.

If on the other Hand the Water be retain'd longer than usual, or its Quantity lessen'd, then the Bladder is stretch'd with the excessive Weight, and cannot perform its Office; this is common to Lawyers and Courtiers, who being oblig'd to sit or stand longer than Nature can bear upon necessary Affairs, when Nature calls upon 'em, restrain so long till the Bladder is over-stretch'd, and loses its Power of Contraction; for such a Suppression a *Catbeler* is an immediate Remedy: But if this Retention depend upon the Grossness of the Blood, which does not part from its Serum, we must expect a Train of cold Diseases to ensue: It is not easy to remedy this

this Suppression ; I have known the sam'd Diureticks fail of their Effects. These irritating Medicines, to speak the Truth, seldom do encrease the Quantity of Urine, as some imagine ; we give the Juice of Mil-lepedes, Tincture of Salt of Tartar, dulci-fied Spirit of Nitre, and the like, to little purpose ; the sole Method of promoting U-rine to its usual Quantity, is to amend the *Crafs* of the Blood ; and altho' it some-times happens, that a Draught or two of Punch will have this Effect, yet for the most part, the Water never continues to flow freely, till the Blood and Juices are returned to their natural Tempera-ment, from whence they departed ; and as the Causes producing this Ischury are nu-merous, they must be known and well dis-tinguish'd, e'er any great Good can be ex-pected : If it arise from the Bladder, we are to consider whether it be a Stone, a Grume of Blood, a Callus, a Tumor, a Pal-sy, a Straitness of the Orifice, or any o-ther Cause, that introduce it ; if the Cause be from the Kidneys, we must know, whe-ther it proceeds from a Stone, an In-flammation, an Abscess, or Ulcer, from a Plently of Blood, or any Cause of the like Nature, before we attempt to relieve it. I don't know of any Disease whatever that has worse Effects, or is more difficult of Cure, than a Suppression of Urine ; and

therefore it ought to be well guarded against.

*Sanctarius* is copious on Coition, as if no other Evacuation were of Value; he shews us how, if excessive, it curbs Perspiration, hurts Concoction, occasions a Lassitude, increases a Perspiration of crude Humours, destroys Agility, prejudices the Lungs, cools the Stomach, raises Palpitations, introduces Obstructions, checks Stools, (hence some commend it in *Diarrhæa's*), hurts the Eye-sight, destroys the natural Heat, raises Inflations, heats the Kidneys, and causes Gravel, introduces Catarrhs and *Syncope's*: All these Effects depend upon an excessive Draught of a Balsamick Liquor from the Blood, and a Bent towards a particular Part; for it would not cool the Blood, and heat the Kidneys, if the whole Blood were not drain'd of Spirits, whilst the Blood's Motion were more than usually determin'd towards the Kidneys; and from hence it is, that such as have us'd themselves to the Repetition of this Action, as far as Nature would bear, become more able thereby: But on the other Hand, an Abstinence from it, disables, stops Perspiration, makes Men effeminate, brings on a Weakness and Inability; and by being corrupted, produces many hypochondriac Cases; from hence proceeds that monstrous

Appe-



Appetite, call'd the *Furor uterinus*; so that whilst it continues to stimulate, it enrages the Spirits, and moves the Blood into various Disorders; but, when by a long Abstinence, the *Semen* has forgot its Road, the Passages begin to be block'd up, and they become natural Eunuchs.

THE Use of the *Saliva* or Spittle, will discover to us, what Damages can accrue to Mankind from its Suppression or Excess: If it softens the Fibres of the Victuals, and renders them more fit to part with their alimentary Tincture; if it contains Principles fit for fermenting, as doubtless it does; if it flows constantly, and is swallow'd into the Stomach for softning, fermenting and blending the oily, the saline and watry Particles together, and making seemingly an uniform Liquor, which Physicians term *Chyle*, it answers Nature's first Purpose of Digestion: How imprudent must they be then, who are prodigal of so useful and so necessary a Liquor? Smoaking is become an universal Practice, and is us'd more as an Amusement, or an Assistant for Guzzling, than for any Good expected from it; mean while nothing contributes so much to abate our Appetites and Concoction, as this Abuse: The Salts of it are of the alkaline Kind, besides, it is stock'd with rank Sulphurs, neither of which conduce to raise



an Appetite; and if Spitting be necessary for the Ends and Purposes mention'd, why will we be lavish of so precious a Store? I cannot deny how beneficial Smoaking is to Persons subject to Defluxions on the Lungs; it is a strong and constant Revulsion, and I have known phlegmatick Coughs and Hoarsenesses taken off by it, where other Remedies fail'd; but then are healthy Persons to be pinn'd down to Rules, which are only to be follow'd by some few subject to breed too much Phlegm? Nor shou'd those very Persons tamper with Tobacco in the Summer, which is a Season that dry's our Humours; in short, the Healthy and they who are of a warm Constitution should avoid it; because the first perform their Functions well, and the latter would be more heated thereby; One Advantage attends the Use of a single Pipe, that it relieves Costiveness; Smoaking also by drawing the Spittle, contributes to make us lean; and scorbutick Persons, whose Mouths are apt to flow with Spittle, by spitting often, grow emaciated: Let the Taste of it be ever so nauseous, the Damage we receive by swallowing it, does not come up to the Disadvantage we suffer by throwing it out; a deprav'd Digestion is better than none: When therefore we spit out all the *Saliva*, or when it is suppress'd, and our Mouths are too dry, we suffer equal Damages.

I have already, in the Chapter of Diet, shewn what we suffer from the \* *Menses* and † *Lochia*, but as this is the proper Place, I shall only take a transitory View of the Advantages of their Regularity, and of the Damages received by their Suppressions and Excesses : The Measure of Womens Monthly Purgations is not determin'd ; but some Authors have computed, that the Quantity of a Goose-Egg is sufficient for most ; it must be computed by their Size, their Appetites, and in short, by their Plenitude : And as an exact Proportion is hard to be commanded, therefore it is that Women are generally tender and sickly ; if their Blood become too gross, they labour under Green-sicknesses and all its Consequences ; and sometimes inflammatory Disorders, if the Blood be rheumatick ; if their Blood be too sharp and hot, they have too many of them, and complain of Anxieties and Weakness ; and at last the Excess throws them into Dropsies. If the *Lochia* flow enough, the Blood, which had fill'd and distended the *Uterus*, is thrown out, and then that Organ re-

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\* Monthly Purgations in Women

† Childbed Purgations.

turns to its ordinary Size ; but if they are suppress'd by Cold or otherwise, Inflammations and inflammatory Fevers ensue, which are attended with Convulsions and Death. Where they flow immoderately, their Strengths decay apace, and they die of Swoonings ; and, the Spirits being much disturb'd, of Convulsions also.

THE Bleeding *Piles* are to Men, what the Monthly Purgations are to Women ; with this Difference, that the Sedentary and Solicitous are only subject to them ; whereas the former are natural to all Women : And, as Care and a sedentary Life are the Business of the Female Sex, perhaps the same kind of Life is the Occasion of these Fluxes in both ; *Virago's*, who use strenuous Exercise, have few of them, and this confirms my Assertion the better. They become therefore necessary to some People, and ought carefully to be promoted, when Nature has once found that Vent ; for if they be check'd, they fall upon the Kidneys or Bowels, as I have often experienc'd, and particularly in a Gentleman, who had them every Month, but, by some Accident, which I can't call to Mind, they forgot their natural Course, and rush'd into the Kidneys with great Fury, and then he made bloody Water in large Quantities, which weaken'd him much : After having often

curb'd

curb'd this Flux, and advis'd him to a Method, first, how to make it run into its former Channel, and then to keep it within Bounds, I perceive the Method was represented as tedious and uncertain, and a shorter Way found out, by which he expired so suddenly in the Night-time of a Vomiting of Blood, that none, even of the Family, could come to his Assistance, till he was dead. As the same Symptoms attend their Suppression and immoderate Flux, and as the same Cure is requir'd for these Faults, as in the *Menses*, 'tis probable they are univocally caus'd; and they are equally useful to Men, as the Months to Women.

'Tis in vain to proceed to enumerate more of these Evacuations; I shall only conclude, that where any of them, especially those of Blood, do exceed their natural Quantity, the Juices are thereby depauperated, and rendered cold; the Spirits, and all the Warmth of our Body are exhausted; for Warmth shews that there are five Principles lodg'd within us; that the Blood is loaden with Saline, solid, and other Corpuscles of a contrary Nature, which by their frequent Attractions, Occursions, Frictions, and Attritions, divide the Juices into such minute particles, that they will pass the least Vessels, and then the Secretions are regular,

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and



and are constantly well perform'd; but when large Evacuations happen, these Salts *&c.* are carried out of the Vessels, the Motion then abates, and Stagnations, Obstructions, Cachexies, Dropsies, Atrophies and such-like, do necessarily ensue. And on the other Hand, if the natural Evacuations are suppress'd, the Blood-Vessels are fill'd with all sorts of Particles; so that sometimes they become gross thereby, and then Jaundices, *Asthma's*, Apoplexies, and such-like Diseases, are introduc'd, where the Fibres are stopp'd up and clogg'd with phlegmatick and cold Humours; at other times they become too saline, and the Leprosies and other Eruptions ensue, where the Salts erode the Skin, are thrown out and scale off; but if the Humour retain chances to overheat us, and inspissate the Blood and Serum, then Inflammations and inflammatory Fevers seize us, where the Viscid is loaden with picquant Salts, by the Virtue of which, they, in the smaller Vessels, stimulate the Fibres sorely, and invite thereby a Flux of Humours to the Part from whence Inflammations arise. Quartans and all intermitting Fevers, do sometimes spring from the Retention of some particular Secretions, where the Shiverings and Hot Fits succeed each other in a regular manner; that is, where the Juices are concreted at first, that all intestine Motion



is drown'd for a while ; which is follow'd  
by a Paleness of the Face, a Difficulty of  
Breathing, a Weariness, a Coldness of the  
Back, and Faintings ; but after the Fibres  
have toss'd the Juices by their Oscillations,  
and mov'd them into Occursions, the Par-  
ticles begin to exert their fermentative or  
intestine Motion, and then Heat ensues.  
These, and many more Diseases, arise from  
Retentions or excessive Evacuations, which  
more particularly belong to a Treatise of  
Diseases, than to this Place.



## C H A P. VI.

*Of the Passions.*

**I**F we consider the Passions in moral Sense, we enter into a large Field, where the Irregularities of our Wills betray the best part of Mankind into Precipices, which baffle all the Rhetorick of Divines. We hear a great many good Things, but follow no Precepts; we are a Creature made up of Soul and Body of an intelligent or spiritual Being, and Matter; the Almighty has chain'd these two into one Compound, each of which have different Laws: They are however fram'd, as that Matter shall be subject to the Spirit, unless the Understanding be obscur'd by Diseases of the Brain, or upon the first Assaults of them, where the Laws, both Divine and Human are very favourable: For what are the first Motions of Passion, but short Fits of Madness; when the Spirits run their Career with greater Fury and Force, than can be conquered at first; we are all sensible also

the force of Custom; Habits almost entail  
Necessity upon us, which want the  
Hand of God in an eminent Degree, to  
deliver us from their Tyranny. Nothing  
more strongly confirms the presence of a  
spiritual Being, than *Abnegation*; it both  
argues a supernatural Gift, and a Soul :  
Brutes do, necessarily, *will*, and as far as  
they can, execute what pleases them; but  
Men, instructed from the Law of God,  
have strong Appetites, which they refuse  
to gratify at so great an Expence, and  
this we call *Vertue* : Where our Appetites  
run high, the Diffidence we have of our  
selves makes us fly those Occasions, which  
strike the Imagination too forcibly : The  
*Will*, say the Divines, is but a blind  
Power, it follows the *Understanding*, as  
this does the Impressions made on our  
*senses*; if therefore this intermediate Power,  
plac'd as it were between our Will and our  
senses, shou'd receive any Prejudice from the  
sickly, or disorder'd State of our Fluids  
and Solids, it neither receives the Im-  
pressions well, nor gives a just Idea of  
them to the Will; so that if Precepts  
and Grace don't prevent us, we fall into  
grievous and pernicious Errors; nor can  
they merit this Appellation, if our Senses  
and Intellects are much diminish'd. We  
nothing but under the shape of  
good; a great deal of Pains shou'd there-  
fore

fore be taken with our Intellect, that we may have a true Taste of what is Good and that it may represent no false Colour to us. Much Learning and Reasoning have been made use of since the coming of the *Messias*, to instruct the Understanding upon this *Topic*; but still our Passions prevail; all the Instances of Harms ensuing and Good to come, prove too feeble to persuade when the Fire is kindled; the Remedies prescrib'd, without complying with supernatural Grace, prove fruitless; we still are deaf, and run counter to Commands and Injunctions; the future Pleasures or Pains seem distant Prospects when our Appetites are hoisted: How unhappy Mortals shou'd we be, if, like our Forefather *Adam*, we were to be banish'd from Paradise for our first Fault. But the New Law has provided us richly with Cures for our Wounds; for if we would but hope and fear strongly, and apply the Remedies prescrib'd, our Passions would be kept in Chains; strong Hopes of future Reward and Happiness, join'd with a horror of Evil, and a strict application of the Instruments of Grace, seldom fail of soothing and calming those terrible Storms rais'd within us: Were we nobly fram'd, as the learned Dr. *Chey* expresses, there wou'd need no Dictator to instruct us how to govern and tame the



these Wildnesses. If the Soul be a Spark  
or a Ray of the Divinity, if it be a  
piece of the Rock, and upon Departure, it  
takes up that Place of this Rock from  
whence it was hewn, the Doctor not only  
convinces the World very fairly, that he is no  
Acinian, but he even entitles every Man to a  
share of the Divinity; he grants no less than  
wish'd for: To have an increated Being  
within us, and to be impeccable, which  
necessarily follows, we might justly say what  
Lucifer was condemn'd for, nor shou'd  
we be ensnar'd with those Debaucheries, which  
elsewhere complains Mankind destroys  
himself with; thus Dr. Cheyne plays Jupi-  
ter's Game with human Race; he debases  
him, and exalts him according to the Hu-  
mour that reigns, he tosses him high or  
low, like a Tennis-Ball.

WHOEVER will give themselves the  
trouble to look into the † Guardian, they  
may see there the Rock from whence  
Dr. Cheyne's Scheme of the Passions is  
hewn; in that Paper the Similitude is car-  
ried finely on, but when it comes to be  
hewn into *Propositions, Scholiums, Corol-*

It shall be like the Highest.

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Laries



*varies*, and the like, it smells so much of Mathematical Pedantry, that it loses of Beauty by being turn'd from an Allegory into a Scheme; and moreover, what the Doctor has added, does not seem entirely Orthodox, which they, whose Talents lay that way, may Examine.

So far Physicians have occasion to meddle in this Moral Part, as to know how to instruct their Patients, to avoid or conquer those Passions, which throw them into Diseases; 'tis their Affair to shew them how to parry them, and also to demonstrate to them, how they affect the Body when they produce Distempers. Good Sense, and raising a different *Idea* of doing this Work; there have been Instances where Men were Cowards by Nature, and yet good Sense and Avarice have transform'd them into Bullies and Generals. *French History* gives us a glaring Instance, how a Lawyer, but a Coward, behav'd so gallantly in Battles, that the General taking notice of his Bravery, mark'd him out for Preferment; the Gentleman finding an insuperable Difficulty in conquering this Passion, went to the General, and wou'd have thrown up his Post thrice, after so many several Fights, which Liberty was deny'd him, with a sincere Promise of Rising whenever a

Oppo

portunity offer'd to advance him to a Post worth his Acceptance; but upon assuring his General, that it was not Promotion but Dismission he aim'd at, and affirming that he found himself upon so many Tryals an invincible Coward; the General dismiss'd him, wishing his whole Army such, and prevail'd with the Court for Preferment in the Law, which he got. How many Instances cou'd be produc'd, where Men, the most passionate of living Creatures, have become by good Sense and Piety, the meekest of Mortals! Yes, the Passions are to be conquer'd, if we go the right way to work, and the Conquest is richly worth our Pains, where great Good is expected thereby: The Advancement of a Family, the Recovery of Health, and Prevention of Relapses, the Serenity and Calmness of the Mind, and our future Felicity, do all depend upon this Conquest; Fears are fit Passions for Women and Children, but Rage shou'd only dwell in Bedlam.

I leave it to moral Writers, to consider the abstract Nature of the Passions; my business is to shew what Emotions and Tumults they raise in the Brain, and what Diseases they occasion and relieve, which shall explain with the utmost Perspicuity.

SOME few Observables, ought to be premis'd, namely, that Physick is of little use to change a Disposition to Passion; this ought to be done by studying how to rectify the Mind, and how gradually to accustom our selves to a different one; Nature will not yield at one Blow, she is stubborn, and must be overcome by repeated Acts; and therefore where it may safely be advis'd we are to seek occasions of Conquest, or represent our selves as placed in such Circumstances, that we may take occasion to introduce a different Habit; that however where Passions are rais'd from the Disposition of the Body, and such we call Natural Inclinations, we may change the Juices by proper Discharges; for in excessive Melancholy, encreasing Perspiration or some other Equivalent, Secretion takes off the redundance of gross Humours, which do often give Rise to this Disease; and upon the same Account, such Diet as is aperient in aiding, and perhaps heating will attenuate the Juices, will generate more ætherial Spirits, and greater Plenty also of them, and will make them move more briskly forward; and consequently will banish those dismal Representations with which deep Sorrow and Melancholy are accompany'd with. That the Force of Passion is greater upon the Juices, than that of Exercise

cise; for the Scene of Action is originally in the Brain, and an excessive Tumult rais'd there, is more effectual in moving the Fluids, than if began in the Blood; \* neither Rest nor Sleep will take off this Tumult, but both allay Fatigue or Over-heats. When we are call'd to relieve a nervous Disease, or even a convulsive Disorder, depending upon a hurry in the Spirits, they are not easy to be conquer'd: An Irritation ever so violent may soon be allay'd, but when the Spirits are put into Motion, their Force is so prevailing, that they are soon put into Motion, but hard to quell; and † *Sanctorius* observes, that Perspiration is harder to be reduc'd to its former and natural State, when it is augmented by Passions of the Mind, than if it had been encreased by Exercise. From these Premises it appears, that the Soul and Body have mutual Effects upon each other; that the Blood will dispose Persons to Rage; and that the Spirits enrag'd, will throw some into *Diarrhæa's* or Fluxes. This

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\* *Motus vehemens animi differt a motu vehementi corporis; hic quiete & somno; ille nec quiete nec somno cessat. Sanctor. Aphor. 41. De Animi Affectibus.*

† *Corpora quæ perspirant plus solito, non propter motum corporis, sed propter vehementem aliquem motum animi, majori cum difficultate ad solitam & salubrem perspirationem reducuntur. Aphor. 38. De Animi Affectibus.*



Connexion is certify'd by every Instance of Life ; but as no Man could ever yet explain the *Modus* of the Union, methinks it is a bold Task to undertake to determine on higher Matters, till we can conquer this Puzzle ; we pronounce with an Air of Assurance on what concerns the Divinity and all its Ordinances, and yet we can't say any thing certain on our selves ; the highest we can go, is to affirm an Union between Matter and a spiritual Form, and it would be acting against common Sense to deny it ; but why this Form should be oblig'd to lose its Power of acting where the Brain is distemper'd, here all is silent.

BUT to proceed to Particulars ; let us take a View what Effects some of the most noted Passions have upon human Bodies : In *Sadness* the Ducts and Siphons of the Brain are in like manner straitned and contracted, as Bathing contracts the whole System of the Fibres ; if a retrograde Motion of the Spirits could be allow'd of, we should say that they retir'd into the Brain, and fled into a safe Retreat. However, it looks as if the Nerves in fearful People had an Anti-peristaltick Motion, by which the Spirits were impeded and check'd in their natural Excursions ; and this Condition of the Nerves is the



the rather to be thought the true State of Nature under Fear, because all the Consequences follow naturally from it: For why does the Blood flow more sparingly and more lazily thro' the Vessels, but because the Nerves being clos'd up, do permit no Passage for the Spirits to run to the Heart, which being depriv'd of their Influence, cannot contract or dilate as it ought? Why do we sigh when Sad, but because the Blood stands still in the Lungs for some time longer than usual, and they feeling the Load at last, are stimulated to shake it off by a strong and long Inspiration, which is of Course follow'd by a long Expiration? Why do the Cheeks in Sadness grow wan and pale, but because all the Blood does not run to the Extremities for want of Spirits to actuate its Course? Why does their Tongue fail, but because the Spirits are deny'd to the Muscles that move it? Why does their Heat abate, but that the Particles are congeal'd, and a Lensor is introduc'd, from a decreas'd Influx of the animal Spirits? From this State we meet with destroy'd Appetites, and with deprav'd Constitutions, from the want of Spirits, and from a want of intestine Motion: 'Tis usual in Palsies to want a Stomach, and to digest badly, because the Spirits concur to every Action in Life; wherefore, if they are wanting, that Function, whatever it is,

must be ill perform'd. Why does Fear produce the Scurvy, but because it arrests the Motion of the Spirits and Blood; and Juices stagnating grow tart, and taint the whole Mass? From hence it is that such People are subject to Heart-burns, because the Juices growing sour, separate these Humours into the Glands of the Stomach; and from hence also a lasting Melancholy is produc'd: Our Thoughts depending on our Juices, if they are gross and sour, the Spirits partake of their Taint, and move slow; from whence heavy Idea's ensue. Why do intermitting Fevers attend the Dejected, but because the Juices, for want of due Circulation, stagnate and grow sour, and coagulate the Blood; Perspiration abates, and introduces a bastard Plenitude; so that the Blood is fill'd with a Quantity of heterogeneous Matter, first standing still and creating a Coldness, and then moving briskly forward, after a strong Concussion of the Fibres, and introducing Heat and Sweats? Why are Sad People subject to Vapours and the Hypochondriac Disease, but because the Spirits being arrested in the Brain, are few, and from hence the Stomach, the Bowels, the Heart, and every Part is robb'd of their Influence; the Juices therefore stagnate every where, and growing sour, irritate and twinge the most sensible Membranes into Pains, occasion Inflammations

flations in the Bowels, and blow up the Mesenterick Nerves into Spasms, so that somewhat like a Ball rises at the Navel? Why are Obstructions produc'd from this Passion, but because all viscid and gross Humours are the Cause of them; but the Blood moves slowly, and consequently congeals for want of Motion; and Motion is a Consequence of plenty of Spirits; since therefore they are shut up by this Passion, Obstructions ensue. Why do the Parts grow hard by immoderate Fear, but because they grow rigid for want of Humours; and the Humours are arrested in their Motion, wherever Spirits are wanting: Hardness is a close arrangement of the Fibres; if they contain Moisture between them, they are soft; but if this Moisture is drain'd or deny'd, they approach to each other and grow hard; and as the Spirits don't circulate the Blood, affording Moisture, the Fibres therefore grow hard and rigid.

I CAN'T pass by one Observable, namely, that *Terror* is only the height of Fear, and what grievous consequences do we not see attend this Passion? It immediately curbs any Evacuation of Blood; it takes off Convulsive Coughs, and will, in an Instant, strike Persons dead; an odd Instance of which I met with in my Prac-

tice; viz. a poor Creature having occasion for Water out of a Draw-Well, and, in approaching the fenceless Place, slipped and fell down; so that a Gentlewoman at a small Distance, believing it impossible for her to escape falling into it, took a Fright, and was seiz'd, (as I was inform'd, for I came too late for her Assistance) with Convulsions and Swoonings, of which she dy'd in less than two Hours: Here I suppose we may allow that the Spirits were at once deny'd all free Passage from the Brain to the Parts, and that this Obstruction, this Congelation was universal, so that the Body must necessarily grow cold, and turn a Carcase in a small Time.

HAVING given a Detail of the *Symptoms*, accompanying and following the Passion of Fear, we will descend to some of those depending on that of *Anger*. As Fear has been shewn to depend on a Contraction of the Fibres of the Brain, so is it reasonable to conclude that Anger dilates Passages, and produces all its Consequences by Virtue of this Principle.

FOR why are Persons subject to this Passion capable to bear Fatigue? But because these Spirits flow freely into the Fibres



Fibres every where, and so therefore activate them uninterruptedly; they keep them therefore constantly supply'd, and in a proper Degree of Tension. Why does this Passion excite a Flux in some People? But because the Spirits flow into the Intestines, and contract them into Spasms, and the Reason which determines them thither, must be, that the Nerves running to that Canal, are wider than others. Why are they subject to Convulsions, Epilepsies, and Palpitations? But because their Spirits flow with a vast *Impetus* into all the Nerves; when Nerves are blown up, they shorten and draw the Parts, to which they are chain'd, towards the Original, that is, they throw us into Convulsions. Why do Fevers of all Kinds arise this Rage? But because the Blood and Vessels are hugely toss'd by it. We know indeed of some Instances, where the Small-Pox have been introduc'd by excessive *Anger*, and we also cou'd produce others where *Terror* occasion'd them; and as either Passion has this Effect, 'tis worth while to explain, how the same Disease may be produc'd by so different Causes. If we consider that this Distemper immediately follows these Passions, we may readily give the Reason, why it is produc'd; for whether in *Anger* or *Terror*, the Fi-



bres are shock'd egregiously; and whatever noxious Matter lodges within us, may be driven into Commotions; but this Disease is the Consequence of some Struggle rais'd in the Juices. Ravings have ensu'd Rage, because Rage is a short Madness, and Madness is a continual Rage, so that they differ only in Degrees. And as Anger is a dangerous Edge-Tool, for 'tis not easy to be angry and not Sin, it ought never to be advis'd; and as the Passion of Joy is sufficient to excite a Motion in our Fluids, we will trace its Effects on Mankind.

CHEARFULNESS helps forward the Perspiration, and therefore contributes to make the Body lighter, because it dilates the Canals of the Nerves, and gives a free exit to the Spirits, it encreases their oscillatory Motion, and also that of the whole System of our Fibres; it therefore dissolves and fuses the Blood, for when the Fibres are vigorously vibrated, the Fluids are thrown forward in proportion to their Motion, and if our Juices be kept moving, they grow thinner thereby; hence the *Systole* and *Diastrale* of the Heart become regular and steady, hence all the Secretions, depending upon a regular Circulation, are justly perform'd, nor is any thing re-

tain'd

tain'd which may taint the Mass of Humours, nor is any Matter thrown off, but what shou'd part from the Blood. However, an Excess of this Passion will disturb our Rest, and exhaust our Spirits, and it has been known, that excessive Joy has occasion'd sudden Death. We have Instances, how Excursions of the Spirits in too plentiful a degree, do weaken, and sometimes destroy in Convulsive Cases; the Hysterick Cordials so frequently prescrib'd, have no other View than to prevent the Consequences attending such an Excursion. Let us take a View of an Epileptick Person after a Fit; they fall into Melancholies, Palsies, Apoplexies, Tremors, loss of Senses, and phlegmatick Diseases, they complain of Pain and Soreness all over them, and are excessively weak for some Time after, these Symptoms shew what Weakness the frequent Excursion of Spirits brings on the Epileptick; in like manner, Joy exceeding its Bounds dissolves and weakens us.

AND as all Passions partake of these mention'd, as to their moving the Spirits and Juices, we shall supersede any further Detail on them; for since the design of these Sheets was only to take a View of whatever in the Rank of Non-naturals, was

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was hurtful or useful to Mankind, and to give the *Modus*, as near as we could, how and why they were so; having perform'd that Duty, 'tis high Time to close up this Discourse, and proceed to the *Non-necessaries*.



To this Head, Crowding may be so-  
and which guards as the the Joints  
of the Air, they ought to be proportion'd  
to the Perpiration, which we must keep as  
CHAP. I can be a great Quantity  
in the Country of England  
the Winter and Summer differing very  
nothing decides the better Part of  
those

444 [ 445 ] 444  
was hurtful or useful to Mankind, and  
to give the Moderns as near as we could  
up the Difference, and proceed to the  
Non-necessaries.

## CHAP. VII.

### *Of the Non-necessaries.*

**T**HESE differ from the preceding *Non-naturals*, inasmuch as we may or may not use them; for Example, we can't live without Air, Viſtuals, Sleep, Motion, and the like, but it is *not necessary* for us to live in Foggy or Fenny Countries, to be confin'd to certain Meats or Drinks, or to Sleep longer than we please; wherefore we shall consider some Remarkables under this Head, which have not been handled above.

To this Head Cloathing may be refer'd, which guards us from the Injuries of the Air; they ought to be proportion'd to the Perspiration, which we must keep as near as we can to a stated Quantity; wherefore in this Country of *England*, the Winter and Summer differing vastly in Heat, nothing deceives the better Part of those

those lying down of Fevers, so much as the Mistake of not putting on their Winter Garments soon enough, and of leaving them off too early, hence, I say, proceed all our Autumnal and Vernal Fevers; indeed they who indulge in Wine, to such a degree, as keeps up the due Quantity of *Perspirabile*, may escape Colds or Fevers; whether at the expence of Frugality and Decency is not my Affair to discuss.

To this Head principally belongs the *Kind of Life* we lead, and as our Professions and Trades throw us into Diseases, it were proper to descend to those Particulars, but as this has already been largely treated on by the Learned *Ramazzini*, it may not be amiss to give a plain and concise View of some Part of that Work to our Readers, who have not leisure to peruse so necessary and useful a Piece.

THE Symptoms attending Workers in Mines are Costiveness, difficulty of Breathing, Paleness, the Splenetick Disease, and Swellings of the Legs; wherefore they should be careful of rectifying the Air, by making as free a Vent above as possible, and by living on fat Broths, by taking Balsams, Milk, and the like.



**GILDERS** are Asthmatick, Paralytick, and subject to Giddiness and Scurvies; wherefore they shou'd often take Physick, and keep warm by the Fire; because Physick carries off Mercury, and Fire exhales it.

**CHYMISTS** labour under Consumptions; the corrosive Steams gnaw and exulcerate the Fibres of their Lungs, and as *most* of the noxious Steams are Acid, therefore Alkalines, whether fix'd or volatile, are mostly of use.

**POTTERS** are subject to Palsies, Lethargies, and Cachexies; wherefore, Chalybeates and mercurial Purges, are Remedies proper for them.

**COPPER and Tinworkers** are subject to Asthma's, and therefore they shou'd use a soft and smooth Diet of Milk and Butter, and such like, to prevent their Disorders.

**GLASSWORKERS** are subject to Pleurisy, and chronical Coughs, and therefore Salts which will hinder a Congelation of the Blood, are conducive, particularly the Volatile.

**PAINTERS**

**PAINTERS** have tremblings of the Joints, Cachexies, black Teeth, discolour'd Complexions, a melancholick Disposition, and a loss of Smell; here also volatile Salts are of use to prevent the Minerals so often swallow'd down from turning corrosive. I am also inform'd, that House Painters are liable to gouty Pains in their Feet, an Instance of which I lately met with and recover'd; and as they deal in the same Materials, 'tis highly reasonable they shou'd prevent this Disorder, by taking volatile Spirits in all their Liquors.

**WORKERS** in Brimstone are troubled with Coughs, Hoarsenesses and Asthma; and they ought frequently to feed upon Milk Meats, and smooth and farinaceous Diet, to envelope the Acid Steams, that they may not prejudice the Parts, for the Secretions will be analogous to our Diet, and when the Glands of the Lungs separate their smooth Liquors into the Trachea, they will sheath the Acid Parts of the Steams, and prevent Damage from thence.

**BLACKSMITHS** are bleary'd, and their Eyes are subject to Inflammations, they are also Cofive, for which Inconveniencies they shou'd apply Milk, Barly-Water, and white Troches, either to prevent or cure

and

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and shou'd for their Suppers eat Barley  
Gruel with Raisins and Currans in it.

**LIME Workers** are troubled with Strang-  
lings, Difficulties of Breathing, Costiveness,  
tense Hypochondres, and Pains at Stomach;  
all which Symptoms are best reliev'd by  
Milk, Meats and Oils.

**THE Gleaners** of Jakes are troubled  
with Inflammations of their Eyes, and, in  
our Parts, with Coughs, for which warm  
Water and smooth things, are effectual  
Remedies.

**FULLERS, Oilmen, Tanners, Cheesemong-  
ers and Tallow-Chandlers**, fall under one  
Head; the Smells attending their Trades  
make 'em subject to Headachs, Giddinesses,  
Pale Complexions, Difficulties of Breathing,  
Squeamishnesses, and loathing of Victuals;  
for which Emeticks, Catharticks, Vinegar,  
and such like, are proper; because as the  
Stearns mingle with the Spittle, and are  
swallow'd down into their Stomachs, they  
mingle also with their Nourishment, and load  
their Juices with nauseous Oils, which are  
best corrected with gentler Acids.

**TOBACCONISTS** are injur'd in their  
Heads and Stomachs; upon which Account  
he prescribes Vomits, and as the Tobacco

contains a strong Sulphureous Salt, it wou'd be proper that such as chew it, shou'd take gentle Acids to join in with the strong alkaline Salts of the Tobacco, and correct their Irritations and Dissolutions they wou'd introduce.

BEARERS of *Corps*, and *Grave-Diggers*, are subject to suffocating Catarrhs, Drop-sies, and Malignant Fevers; they are advis'd to Physick to carry off the Matter which is swallow'd down, and to Sours to correct these putrid Salts devour'd.

MIDWIVES, if their Patients are tainted, may suffer Ills, and *vice versa*, Women may suffer from their Diseases, as I knew one who receiv'd a Taint from one of them who at the Time of her Labour, had a venereal Ulcer on her Hand; but as no peculiar Disease, save Fatigue, can be secur'd against, they must, as they generally do, support themselves comfortably.

NURSES are subject to Hystericks, Head-achs, *Vertigo's*, and Difficulty of Breathing, to Curdling of Milk in the Breasts, and to Consumptions, besides what they are liable to, on account of Infected Children; these Cases are so various that it is hard to determine on them without Advice: As one Symptom is constant, that is, Exhaustion, they



they naturally take care to feed the Child by filling themselves.

VINTNERS and *Brewers*, who don't indulge in the Liquors they vend, are subject to grow Lethargick, Meagre, Dejected, Giddy, to want an Appetite, and to make much Water; because Steams that arise in the working of these Liquors in their Cellars, are Acido-Sulphureous: And therefore as they are swallow'd, or even enter by the Pores, they put the Blood and Juices into a struggle, and at first raise Headachs, and such like, from a Plenitude they occasion in the Vessels; but towards the latter End, when they have been accustomed to these Steams, and that they cause them to make large Quantities of Water, they grow lean and lose their Strength, because this constant Drain is greater than their Supplies. As the Steams of Wine produce these Effects by their volatile and lively Particles, I can't readily agree, that such People shou'd depend on volatile Spirits for a Remedy ordinarily speaking; because Sours seem better fitted to arrest this adventitious Struggle than any Volatiles, and therefore Vinegar, Posca, roasted Apples and such gentle curbers of Fermentation, seem better to answer their Purpose; hence it is that dulcified Spirit of

G g 2

Nitro,



Nitre, is by some reputed an Arcanum against Drunkenness and its Effects.

'Tis observable, that *Millers* and *Bakers* labour under Asthma's, and the Reason is plain, because the Atoms of the Flour arise and enter their Breasts, and as they are of an emplastick Nature, they fix upon the Passages of the Lungs, and hinder the Secretion of that Part, from whence it follows, that the Glands will tumefy, and, straitning the Passage for Air, will bring on Asthma's: Now as these Asthma's are produc'd by an Obstruction of the Glands, the Cure is the same as at other times, only some Care is to be taken to prevent the Entrance of these Atoms.

STARCHMAKERS complain of Headach's, choaking Coughs, and difficulties of Breathing; the Headachs, he says, proceed from the Acid Particles of the *Wheat* flying up into the Air, and mixing with the *Saliva*, and with the Humour separated into the *Trachea*; so that the Blood is render'd cohesive thereby, and sticks in the Capillaries of the Head, and so occasions the Headachs: And the Mucus of the Lungs is also render'd gross thereby, so that Asthma's or Coughs, and Hoarsenesses, are hurried on; from this Account, we may justly infer that volatile Salts (which correct this caustick Acid;

Acid; Caustick, because Starch, says he, corrodes Linnen) will be a Preventive against the Diseases of these poor Labourers.

He shews us that *Stone-cutters* died of *Asthma's*, from the subtil Powder of the Stone ascending and loading the Passages; and this I have often found verified in such Workmen, who even studiously us'd to turn their Backs to the Wind, and were fond of that Weather; and as such *Asthma's* are generally invincible, 'tis their Business to guard the best they can against them.

Masons and *Bricklayers* are subject to Consumptions from the caustick Quality of the Lime; against which, Water-Drinking, and eating Almonds, are Preservatives, as well as sanative in Disorders from thence.

LAUNDRESSES and *Washer-Women*, by keeping their Feet constantly wet, bring on Suppressions of their *Menstrua*, and Cachexies from thence, as also Coughs, and *Asthma's*, Fevers, and Catarrhs; for which he gives Emeticks and Catharticks, to throw off the Redundance of Humours retain'd by the stoppage of the Pores; and Aperients to restore the Perspiration, as well as to open the Suppressions introduc'd.

G g 3

HATCH.

**HATCHERS** of *Hemp*, are subject to **Coughs** and **Blar-Eyes**, and **Silk Workers** to **Consumptions**; all these Afford subtile Particles, penetrating into the Parts, and corroding them, so that Irritations and Inflammations ensue; wherefore, in order to prevent any Consequences, or to cure them when produc'd, he advises them to fall into a **Milk Diet**, and to take all smooth Plants to envelope the acrimonious and ulcerating Salts.

He says, that *Bath-Guides* are subject to **Cachexies**, which may naturally be usher'd in by too expensivè an Evacuation of **Humours thro' the Pores**, from whence the **Humours** grow grosser, and are apt to stand still in the extreme Parts; so that they send others off, cur'd of the Distempers they themselves die of, for *omne nimium, Naturæ inimicum*; gentle Bathing attenuates, whereas excessive thickens the **Humours**.

**MARINERS** are subject to the **Scurvy** and **Cottiveness**, from the saline Vapours arising and entering with our Spittle, into our **Mas of Blood**, and coagulating it; however, I am apt to believe the salt Victuals they live upon, is the main Occasion of all their Symptoms; they take long Voyages, and it were impossible to furnish such

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Numbers of Men with fresh Provisions, wherefore are they oblig'd to feed upon salted Meats so plentifully, that their Blood is highly infected with it; for the Cure of which, Water-drinking, and Volatile Salts will answer their Purpose: And in the next Chapter, he advises for the Workers in Salt Pits, generous Wines, Spices, and all Ingredients possess'd of a volatile Salt; nay, he advises Brandy as a Remedy for the cold Scurvy, because it dulcifies the Spirits of Salt.

To be brief, *Standers* prejudice their Limbs, and direct the Course of Humours into them; *Sisters* grow Pale and Scabby; *Runners* are subject to Ruptures of Vessels; *Grooms* and *Riders*, to Ruptures of Vessels also, and to Pains of the Back; *Porters*, to Asthma's or Ruptures; *Wrestlers* to Swoonings, and Breaches of Vessels; *Watchmakers* to Short-sightedness, or Blindness; *Singers* to Ruptures, unless they be Eunuchs; *Husbandmen* to Colds, Catarrhs, Colicks, Quinzy's, and Defluxions, all which proceed from the Inclemency of the Air, stopping up the Pores, and loading the Mass with a Quantity the Vessels can't with ease contain, so that it extravasates and produces the Diseases they are subject to,



SOLDIERS in *Camp* are subject to Fevers of the most dangerous kind, which begin with Uneasiness and Anxieties, with Shiverings, and terminate in Lethargies, great Heats, weak Pulses, Deliriums, and Convulsions; whoever Consults *Cocherius's Decade* on this Head, will be satisfy'd of the Danger, and he also reckons the unwholesome Waters, the nauseous Steams, and unavoidable Filthiness, some of such Numbers will be guilty of; where Bezoardicks of the volatile Kind, after Emeticks, are found of use, to promote Sweat at all Hazards.

He concludes with the Diseases of Learned Men, who sit much, and study hard, and says they grow Cachectical, and at last Lethargick; and well they may, since they exhaust themselves to serve the Publick.

To these, many more might be added: If I had not already been copious enough; these are sufficient to shew, that procatactick Causes, whether necessary or non-necessary, do act univocally in producing Diseases, and that those Diseases are very often advantag'd as to their Cures, by viewing their evident Causes; If we narrowly enquire into every thing that has preceded our Distemper, and possess a true Notion of the Qualities of the introdu-

cing



cing Causes, if we also heedfully look in-  
to the Symptoms, and see what is doing  
within us; and lastly, if we collate these  
Appearances with these Causes, it is hard-  
ly possible for us to be mistaken in the  
Disease, in its Cause, in its Consequences,  
or in the Cure, so far as can be done. But  
how slightly are those Enquiries made,  
and how unsuccessful must we then be in  
Proportion, may readily be guess'd. And,  
as I have in the first Part of my *Euodia*,  
given Rules to direct the Enquiries of  
young Physicians in all these Points, I re-  
fer my Readers thither.

Thus have I given an ample History of  
the *Non-naturals*, as they relate to Sick-  
ness in particular, having sketch'd out a  
transitory View of them, as they related to  
Health and physical Enquiries in the \* *Euodia*;  
I hope 'twill be useful to the younger  
Physicians, who are often in a Mistake as  
to the Directions they give in Diseases.  
Allowances in these which run Counter to  
the Disease, are fully as hurtful as Medi-  
cines misapply'd, for Reasons already men-  
tion'd; and I believe few have any regard  
to *Regimen*, which, to speak Truth, is a  
Correlative to the Medicines prescrib'd.  
There ought to be no Indication pursued  
without Signs betraying the Cause; for to

prescribe by Custom, is no Maxim to be observ'd by a conscientious Physician; if he errs, he has some specious Pretence for his Error: And of what Nature soever the Medicines are, the Diet and the other Non-naturals must coincide with them, or we act in Contradiction to ourselves. Liberties taken and not granted, fall not to our share to account for; Persons committed to our Care, depend on our Judgments; which, being ill fram'd, or ill instructed, is an Error in Conscience and Politicks too: If we are so happy as to procure Patients to entrust themselves in our Hands, but fail of relieving them for want of due Information, *magnis excedemus Ausis*, we shall soon be discarded, and, like the *French*, we shall gain Conquests which we can't maintain; whereas, Men of true Erudition and Observation can't fail to keep Footing, since Success, or fatal Prognosticks secure their Conquests, one of which they are always Masters of. 'Tis an equal Honour to a Physician, to be able to denounce to the Patients or their Friends, what the Event will be, or how they are likely to perish, with assuring them of their Recovery, and keeping his Promise; for it gives them a high Idea of his Judgment, when they perceive a Physician at no loss. And he who knows what is to come in Diseases, can never be at a stand to know what

what is past. However, as all this is a pregnant Argument of Skill, and as that can't be acquir'd without due Study and Information, I shall conclude these Sheets with giving Students in Physick some short Directions how to lay in a sufficient Stock of that Science.

AFTER they have taken a sufficient Care to be well instructed in School-Learning, namely, the Latin and Greek Tongues, and have been instructed in all the Parts of Philosophy, and have a tolerable Knowledge of the Mathematicks, their next Step must be to be thoroughly inform'd of the Parts of a Human Body; if we are ignorant of this, we can guess at no Symptoms, nor give any *Rationale* at all; we are utterly in the Dark, and practise by Chance: There is so great a Dependence between this Knowledge and the Exercise of the Profession, that the Cause may lodge in the Head or Bowels, when they deem it to be in the Lungs; so surely is a Right-line the Measure of itself as well as of oblique ones. When we know how the Parts or the Secretions ought to be by Nature, we surely know they are under Disorders, if they answer not our Informations we receiv'd of them in Anatomy. The readiest Method of acquiring this Skill is by Dissections; Books are lame Instructors of them.

themselves: They rub up our Memories indeed, and serve us to recognise, but are not to be trusted at first. When we have by a Course or two seen all we can, rest a while, and make the Knowledge of it habitual to us before we proceed to another Study; when we can readily remember the Parts and their Names, 'tis then a proper Season to proceed to the Study of *Chymistry*, which ought also to be seen; there is not indeed much to be learn'd by the Courses, as they are now taught, because, to see Tinctures, Spirits, Resins, Salts, Calces, Precipitates, and such-like Medicines prepar'd, is barely Mechanical, but the main Point is to know the Principles Bodies are compounded of, which is too little regarded. When this Course is over, we ought to pause here also, till we have perus'd some choice Authors on these Preparations, and have requir'd a facility of Reasoning on them. 'Tis now high time to proceed to *Botany*: The knowledge of Plants is no further necessary than to prevent our being deceiv'd in them; and at the time we set out in the Study of *Botany*, we ought to inspect into *Pharmacy* also: the Knowledge of Faces is commendable, if we don't turn it into a Vice: A few Plants or Drugs serve our turn; and so soon as we have made them our Acquaintance, bid them adieu: To be a compleat Botanist is a Vice com-



commendable enough for one in a County; it is not their Faces we want to know; Physicians must embowel them, he must torture them to know how to ease his Patients: For this Purpose he ought to apply himself to the Study of their Virtues; and as that is not rationally attain'd to without a Collection of undoubted Experiments, without ocular Demonstration and true Reasoning upon those Facts, he ought to apply to proper Persons to instruct him what Effects they will have upon the Juices and Fibres; and this is what Authors call the *Materia Medica*. When he has been instructed in all these Parts, he ought then to be inform'd in the *Practice*, both General and Special: The Scheme should be *short, easy, methodical*, and *comprehensive*; *short*, that they may not be puzzled with too great a huddle of useless Notions; *easy*, that their Imaginations may not be kept too hard at Work, nor their Understanding disturb'd; *methodical*, for nothing conduces so much to assist the Judgment as a true Method, it connects the Parts of a Science with such a natural Harmony and Order, as to be capable of being retain'd for ever; and lastly, it should be *comprehensive*, and contain all Cases that have hitherto appear'd in Physick; without this last Circumstance the Scheme is invalid; and it ought to appear



appear demonstrably, that this is universally true! It may indeed be thought a hard Task to prove any Scheme so perfect, as to take in the whole Compass of Observation; however, it is not barely possible: A Scheme by being perfect does not exclude incurable Diseases; it shews how they are to be manag'd, but does not propose Impossibilities; however, it includes all minute Divisions, which the various Distempers we labour under can admit of, and adapts Remedies proper for such Variety. When Students are become Masters of this Method, and have descended to Particulars enough for such an End, they are then put to visit the sick in Company with a proper Guide, who can exemplify the preceding Method in all its Circumstances: This last Step is not so absolutely necessary, but that a little Diligence, good Sense, and consulting with a Person vers'd in the aforesaid Scheme, will supply the Defect of having seen Patients, as is the Case in *Germany*.

THESE last Steps are the true Foundation for making a Physician eminent in his Profession; 'twere better to want those celebrated recommendatory Embellishments, than these last Accomplishments: A Person understanding Classical or Mathematical Literature, makes a sorry Figure at the Sick's Bed-side, without the exact Knowledge

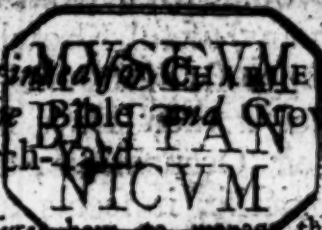
ledge of his Profession : I am far from discouraging young Men from loading themselves with any useful Knowledge ; but too many begin to study Physick too late, they have employ'd their Days in Sciences foreign to their Occupation ; and when they begin to practise, it seems as if they ow'd no Service or Good to their Neighbours, but to themselves ; or, as if they did not begin a Business, but set up a Trade.

**F I N I S.**



Thus I have shew'd the true Foundation for making a Physician eminent in his Profession ; I were better to want those celebrated recommendatory Embellishments, than these last Accomplishments : A Person understanding Classical or Mathematical Literature makes a sorry Figure at the Sick's Bed-side, without the exact Knowledge

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